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SOUTHERN TEXTILE BULLETIN

VOLUME 25 CHARLOTTE, N. C., THURSDAY, DECEMBER 20, 1923 NUMBER 17

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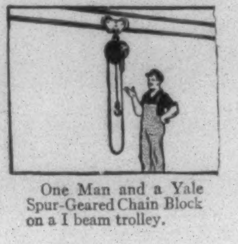
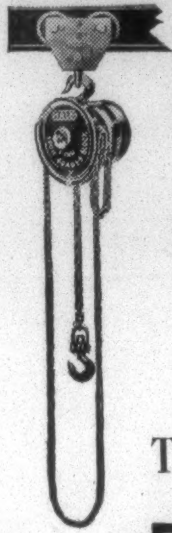


One Man and a Yale Spur-Geared Chain Block on a I beam trolley.



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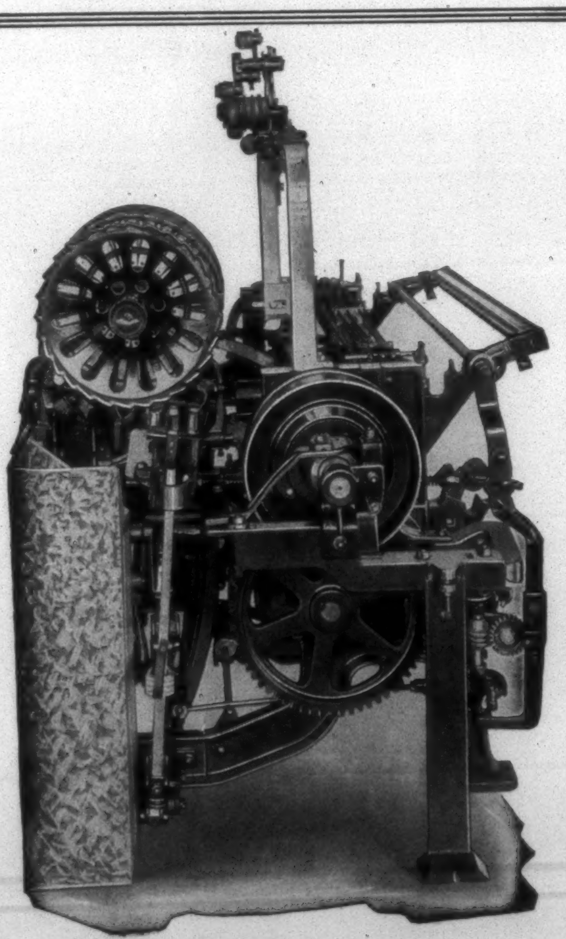

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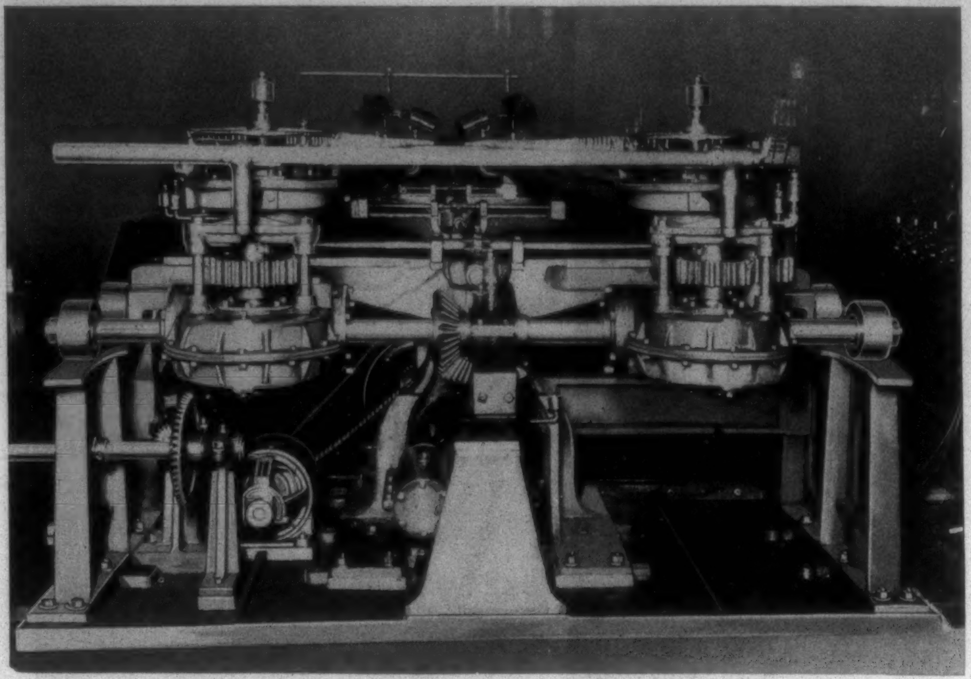

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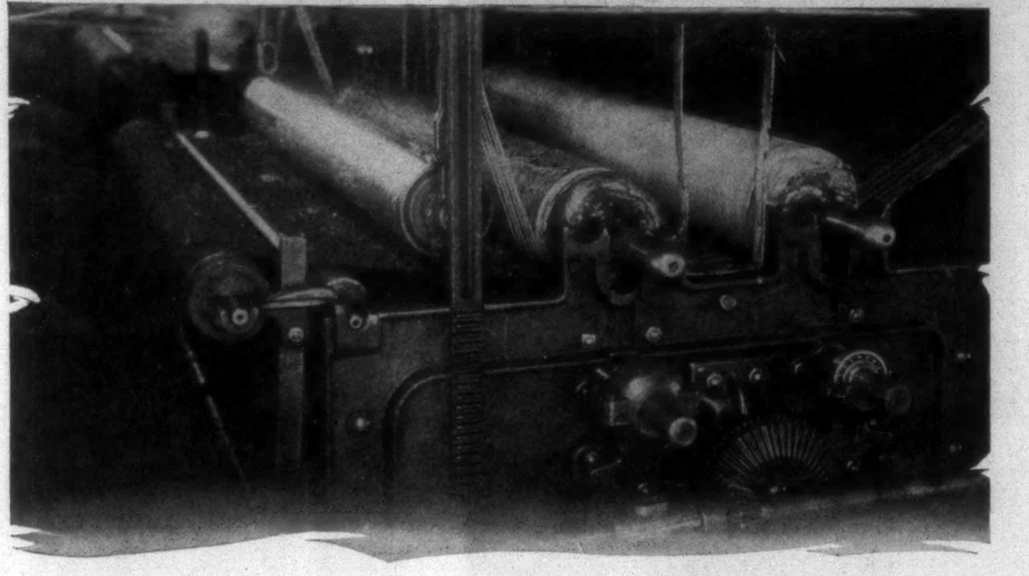

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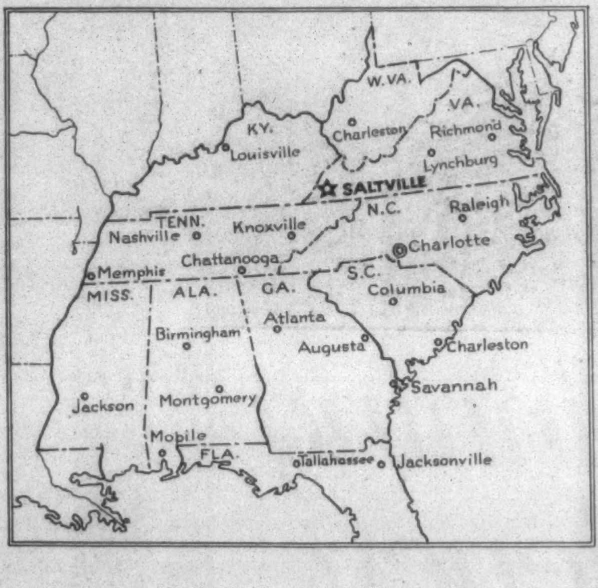

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SALT is the starting-point in the manufacture of all Mathieson Chemicals and enormous quantities are required. The great salt deposits at Saltville, Va., determined the selection of that site for our Southern plant over thirty years ago.

These deposits have been worked since Colonial days and occupy a prominent place in the pages of American History.

Our Saltville plant is the logical source of supply for all Southern consumers of Soda Products. We serve you direct from the works in both carload and less-than-carload quantities.

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SOUTHERN
TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 39-41 S. CHURCH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MAR. 3, 1879.

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Report on Work of Textile Division

Although operating under difficulties of small appropriation and consequent small personnel much work was accomplished by the Textile Division of the Bureau of Standards in the fiscal year 1923, according to the annual report of Dr. George K. Burgess, director of the Bureau. Some work also was accomplished in dye investigations, the report states.

Considerable of the work of the Bureau, in practically all divisions, was made possible by contributions, financial and otherwise, of trade associations.

Of the work in dye chemistry, under Dr. Appel, the report states:

"A year ago the bureau's dye chemist resigned after only four months' service. In September another chemist was engaged, who has made very satisfactory progress. Numerous dyes of known purity have been prepared as spectrophotometric standards. Methods of chemical analysis have been studied and the results correlated with those of spectrophotometric measurements. There will be further correlation by means of dyeing tests on yarns. Two trips were made to New York to attend conferences about dye standardization with representatives of the Treasury Department and the Tariff Commission.

A few samples of commercial dyes were analyzed. Special attention was paid to the comparative study of several samples of crystal violet—all the brands that could be obtained. This dye is used for the determination on colloidal matter in molding sand. It had been claimed that only one foreign brand of the dye was satisfactory for the purpose but the bureau's tests showed that equally good crystal violet is made in this country."

Textile Chemistry.

Regarding textile chemistry, under Dr. Eichlin, the report says:

"Most of the chemical work on textiles consists in making chemical tests of materials that are under investigation by the textile section of the structural engineering and miscellaneous materials divisions. In addition to the various routine tests, a study of the effects of different finishing agents upon dyed fabrics was begun. An investigation of the color reactions of the various cordage fibre was also started."

The work of the Textile Division, as outlined in the report by Dr. F. R. McGowan, chief of the division, was principally as follows, with the subject and the expert or experts engaged on that work:

"The work carried over from the last fiscal year relating to the design of apparatus and most suitable method of testing the comforting value of blankets, which composed three distinct measurements, has been finished, and a detailed publication on the method of test and description of apparatus has been prepared. The problem itself will require additional work in the line of procuring fundamental data in order that the results may be expressed in terms which will make them most useful to the manufacturers of blankets and clothing materials.

"The investigation as to the use of Pima cotton, as outlined in the last annual report, is still under way, since mail sacks made from this cotton are still under service test by the Postoffice Department. Examination from time to time has indicated that no marked changes have occurred in the quality, and there has been no marked decrease in the strength of usefulness of the bags.

Sheeting.

"The investigation of sheeting was carried on to determine the physical properties of sheetings, as obtained from commercial houses, in an effort to obtain standard specifications for sheeting. The work took into consideration 30 or more different types of sheetings, and after being tested the results were reported to the manufacturers submitting samples through the textile division of the Bureau of Foreign and Domestic Commerce, the latter having been instrumental in procuring the samples. From results of this work and surveys which have been carried out specifications were submitted to the Joint Committee on Research and Standardization of the Cotton Industry for their consideration. No reports of final adoption are available to date.

"The Veterans' Bureau was anxious to dispose of a large quantity of textiles. At their request the Bureau of Standards made an appraisal of this material. The survey included items ranging from cheesecloth to heavy duck, bandages, towels, absorbent cotton, aprons, sheeting and blankets.

"A recent publication of the Bureau of Fisheries on the effect of the available commercial treatments for preserving fish lines includes the work on the physical properties of these lines made by this bureau. The publication shows the effect of the different preservations on the life of the material, also their effect on handling by making the materials pliable or stiff, as the case may be. It is planned to carry this work further to include various other types of textiles used in the fishing industry.

"The work on the investigation of the workability of the apparatus used to determine the abrasive qualities of fabrics was not in progress the greater part of the year. At the request of the Joint Committee on Research and Standardization of the Woolen and Worsted Industry the work was again started to cover one or two important problems of the wool industry. The investigation on the effect of the variables of the machine has not been completed. It has not seemed advisable to place this device before the public, inasmuch as the preliminary data have not been completed.

Balloon Fabrics.

"At the request of the Navy Department a series of tests was made on the outer cover cloth of large airships similar to the ZR-1 to obtain fundamental data on the relations of the stressse in the covering. The work covered methods of application and the effect of different applications on the strength and serviceability of the material.

"Surveys have been made of available apparatus used for fading and for indicating the degree of fading of various colors on a number of textile materials. The work was undertaken at the request of the American Association of Textile Chemists and Colorists, whose purpose it is to obtain standard methods of testing fastness to light, washing and other factors. The bureau is testing one set of specimens, which was sent out by the association for the purpose of checking. This work is to be correlated with the project of standardibation of dyes.

"At the request of the postoffice department a further survey was made to obtain data which would enable that department to secure the most suitable belting for their purpose. Inspection at the New York postoffice indicated that in considering specifications for belting for that particular branch of service, account should be taken of a number of variables which enter into the life of the belt, such as the condition of the mechanical fixtures. As a result of the bureau's recommendations, specifications covering rubberized fabric and stitched canvsa belts were drawn up by the postoffice department in co-operation with the textile section.

Brattice Cloth.

"At the request of the bureau of mines, co-operative work has been started on the preparation of specifications for brattice cloth specifications for application, and specifications for testing the material. A survey of the present materials used in the different mines, classified as to location and gaseous condition, was made by the bureau of mines; and later a survey of application was made by a representative of the bureau. The matter has been placed before the manufacturers' advisory committee for their consideration. The plan as now outlined includes the introduction of fabrics made from hard fibers and an investigation of gre-resisting and water-resisting treatments.

"At the request of a manufacturer of magnet wire, a committee was formed composed of electrical wire manufacturers and cotton yarn dealers for the purpose of drawing up a standard method of testing the physical properties of electrical cotton yarn. To date the committee has succeeded in drawing up standard methods of testing breaking strength, and is now working up a standard test to indicate the uniformity of winding of the yarns on the cheeses.

"As an item on the preparatory program of the war department, the substitution of cotton for jute sandbags has been turned over to the bureau. This requires a survey of the present containers available and also the possibility of utilizing paper yarns and textile fibres. The possibility of using bale wrappings has been entertained and can be brought about by the introduction of cotton wrapping for bale purposes.

Survey of Specifications.

"In general in the previous formation of textile specifications by the various government departments very little investigational work was used. This makes necessary a thorough study of each of the fabrics under consideration with a view toward forming an efficient specification based primarily on commercial materials. By commercial materials are meant those which are now being manufactured or those which will be by general agreement used as commercial standards.

(Continued on Page 35)

Organization and Construction of Dye Houses*

(By A. W. Benoit, Textile Engineer, Boston, Mass.)

The purpose of a dye house is to apply and fix colors to textile materials of all kinds, although the scope of any one plant is usually limited to one or two kinds of materials. The chemistry of dyeing is rather complicated and will not be touched upon. The purpose of this paper is to discuss from the engineer's viewpoint the machinery organization, location, construction, ventilation and piping of dye houses. These topics are treated in more or less of a general way and certain fundamental principles are laid down which can be applied to individual cases according to the conditions which surround them.

2. The average dye house of the past was a damp, gloomy room, with murky windows, a series of shallow puddles, a confusion of trucks and machines, water dripping from the ceiling and pipes, and clouds of vapor rising from the kettles. Quite often the view consisted of one vast cloud of white vapor with a few shadows scattered through it. Fortunately that condition is fast disappearing and it is now realized that a dye house will function better, give greater production, with less damage to stock in process, if it is a well-lighted, well-ventilated room, free from steam, with reasonably dry floors and ceilings, and be a desirable place for a man to work in with reference to his health and mental condition.

3. This change has been brought about partly by statutory requirements, partly by demands of the employees for better working conditions, but largely by the advance in engineering practice and the closer co-operation of the engineer and the mill owner. There has been at the same time a revolution in dyeing processes, both as to methods and materials, which has simplified many of the problems.

4. The equipment mentioned later may not be complete in every detail since there is more or less special machinery used for special purposes and processes. There is considerable individuality shown by dyers in their methods and a wide variation exists in the methods employed to obtain similar results. As a rule the machinery used by all dye houses to dye raw stock, yarn, and cloth is very much the esame, but the method of handling and the processes vary.

5. There are two distinct classes of dye houses, one being the converting plant which does dyeing and finishing for the trade; and the other, the plant dye house which dyes and finishes for one mill only. The first generally covers a wider range and is prepared to do a great variety of work, while the latter is naturally of a narrower scope and is usually limited to dyeing the product of one plant. Converting plants are sometimes equipped to do bleaching and mercerizing, which add complications to their problems. For the purpose of this paper the dye-house problem will be discussed from the standpoint of the plant dye house.

6. The operation of dyeing enters largely into the four great branches of the textile industry, cotton, worsted, woolen, and silk, and in many cases these lap over each other in the individual plants because of the great variety of combinations of stock used in making cloth. Cotton may be dyed in the raw stock, as yarn, or in the piece. Worsteds are dyed in the top, as yarn, or in the piece. The bulk of the woolen fabrics are dyed in the stock, but yarn and piece dyeing are also common. Silk is generally dyed as yarn.

Machinery Organization.

7. Following is a list of the kinds of machinery used in cotton, worsted and woolen dye houses. It will be noted that many of the machines appear in more than one of the lists. It must be borne in mind that most dye houses handle more than one kind of stock and in more than one form and will contain machines from more than one group.

Cotton Dyeing Machinery.

For Yarn:
Boiling out machines.
Doubling machines.
Chain dyeing machines.
Splitting machines.
Beam dyeing machines.
For piece goods:
Jigs.
Continuous dyeing machines.
Padders.
For raw stock:
Pressure kettles.
Rotary raw stock kettles.
Hand tubes.

Miscellaneous Machinery.

Dye cans.
Mangles.
Washers.

Worsted Dyeing Machinery.

For yarn:
Rotary skein dyeing kettles.
Spool dyeing kettles.
For piece goods:
Piece dye kettles.
For slub dyeing:
Top-dyeing machines.
Other machinery:
Crabs.
Steamers.
Flat and string washers.
Extractors.
Carbonizing machines.
Dry cans.
Tentering dryers.

Woolen Dyeing Machinery.

For yarn:
Rotary skein dyeing kettles.
Spool dyeing kettles.
Skein dyeing in machines in which the liquir is circulated.
For piece goods:
Piece dye kettles.
For raw stock:

Silk Dyeing Machinery.

For yarn:
Rotary kettle for skeins.
Hand tubs.

8. This list might be added to for special work, but practically all dye houses have a machinery organization made up of a combination of machines from these lists. It will be noted that all of these machines with the exception of the dry cans and carbonizing machine are so-called wet machines, and steam is used in all of them with the exception of the extractors, doublers and splitters.

Processes.

9. Of all dye houses, the one handling cotton only presents the fewest problems, due to the simple construction of the machines, the small amount of water and steam required, and the comparatively low temperatures at which the dye liquors are used.

10. Cotton Dye House. The cotton materials are delivered to the dye house as raw stock, as yarn in ball warps or beams, and as cloth in rolls. The machinery for this organization is given in the above list and requires no special description since it is quite common. In cotton dye houses the drying is usually done in the dye house proper, and for some classes of dyeing heat is required to develop the colors. Dry cans of various widths are used for this purpose, made up in both horizontal and vertical sets. Pits and trenches are required for many of these machines, but not to so large an extent as in worsted or woolen dye houses.

11. Worsted Dye House. A dye house for worsteds is somewhat complicated by the wet finishing machinery required before and after piece dyeing and which should be so placed as to be convenient to the dyeing machinery. Considerable yarn dyeing is done either on skeins, in a rotary kettle, or on spools as in the Franklin process, but the bulk of the work is cloth, dyed in piece dye kettles.

12. Before dyeing the goods are crabbed, steamed, washed and sometimes carbonized. The machinery for these operations is usually in the dye house, but partitioned off from the kettle room. All this machinery requires water and steam in large quantities and calls for a building of somewhat the same construction as a dye house. The kettle rooms contain all the piece, yarn, and top dyeing kettles and the evtractors or squeezers. The drying equipment consisting of dry cans and tenter frames should be conveniently located.

13. Woolen Dye House. In woolen mills the bulk of the stock dyed is scoured wool and noils, although there is more or less piece dyeing and a fair amount of yarn dyeing. The piece and yarn kettles are the same as used in a worsted plant. The only other machinery that should be in the kettle room of a woolen dye house is the extractor.

14. Much more might be said about the machinery used in a dye house, but it would consist largely of the description of machines which are well known. It might be said, however, that as a whole the machinery is exceedingly simple but must be well built to resist the hard usage to which it is subjected by the use of steam, acid, and water. It must be thoroughly reliable because of the damage which can be caused by a breakdown while stock is being dyed.

Location of Dye House.

15. The location of the dye house in the plant is influenced by (1) sequence of operations; (2) water supply; (3) steam supply; and (4) drainage. It is impossible to lay down any fixed rule as to the location of the dye house in a plant in its relation to other operations, because most dye houses handle the stock at more than one stage of the process. Each dye house becomes a problem in itself and its location must be decided upon by the particular conditions surrounding it and the purpose for which it is to be used. If a dye house handles its product all in one form, such as raw stock, yarn or cloth, its location is easily fixed, and if it handles stock in more than one form there is generally a preponderance of one kind which determines its location.

16. A dye house requires an abundant supply of clean soft water. If this is available from a canal or river the dye house can often be advantageously located to secure its supply by gravity and thus avoid pumping. If the water is taken from a pond, it usually has to be pumped and therefore the location of the supply has no influence on the location of the dyee house. When the water is so hard as to require a softening plant, pumping is required and the same thing holds true with regard to location.

17. When the water supply is taken from a river that is polluted by sewage and waste from cities and mills upstream, it is sometimes necessary to install filter plants. This might have some bearing on the location of the dye house as well as its construction, since filter beds are sometimes placed in a part basement under the dye house.

18. A considerable portion of the steam used in a plant which has a finishing department is used in the dye house, either as live or exhaust steam for boiling liquor or for drying materials. While it is convenient and economical to locate the dye house near the power plant, it should not be a factor of any great importance. High and low pressure steam can be transmitted through pipes properly proportioned and covered for a considerable distance with very little loss in heating value or pressure.

19. The waste water from a dye house often presents a problem which must be taken into consideration in locating the building. It particularly affects the height of the main floor, which must be such that the water in the trenches and cross-drains will run by gravity to the point of discharge into a river or sewer. This becomes further complicated by the fact that the future tendency is to compel manufacturers to treat the mill waste before discharging it into the rivers.

20. This part of the problem has a direct relation to the water supply when the latter is a gravity supply, and considerable care must be used in properly adjusting levels. If the dye house is joined to another building from which it receives stock or to which it delivers stock, the same floor levels should be maintained if possible.

(Continued on Page 34)

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*Extracts from paper presented at Meeting of American Society of Mechanical Engineers.

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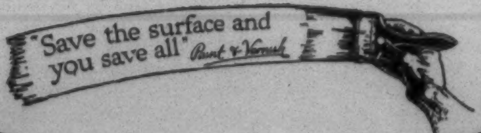
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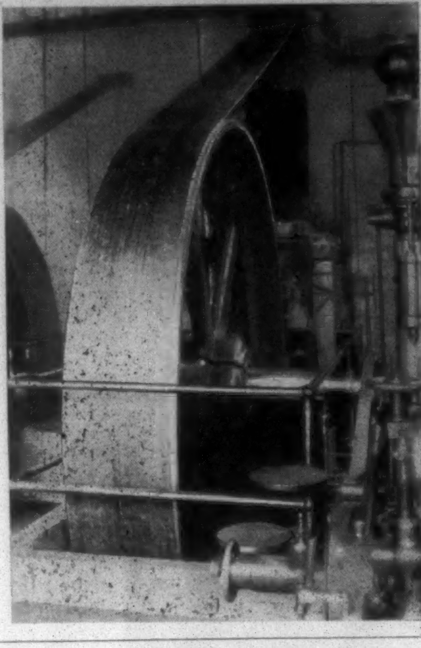

They have paid for themselves several times

THE right belt in the right place. The right quality of leather, the right tanning methods, the right weight, flexibility and thickness to transmit the right amount of power—this is what the Graton and Knight Standardized Series of Belts means. And this is belting economy.

Out in the Middle West the manager of a large mill after making several severe tests with different sorts of belts decided to rebelt his entire mill with leather. Among the leather belts that were used for making the tests were some members of the Graton and Knight Standardized Series.

The Graton and Knight Belts stood the tests so much better than any of their competitors that they were chosen for the job.

And this is what the manager of the mill* wrote us some years later:

"Some of your belts have been running for several years and as they are in as good condition as when they were installed we are unable to give you any opinion as to the length of service we will get out of them, but at this time we are convinced that they have paid for themselves several times."

Send for the book "The Standardization of Belting," and at the same time let us know the type of power transmission you are most interested in. This book tells how, through constant study and analyzation of transmission problems, we have developed a series of belts to meet every condition.

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*Name upon request.

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The World's Cotton Famine

(From Manufacturers Record.)

More than a year ago the Manufacturers Record warned its readers again and again that the world would this year face the most serious cotton famine which it had known since the Civil War. We reminded our readers that the stocks of cotton throughout the world were being gradually depleted and that there was no possibility, by reason in part of the boll weevil and in part by scarcity of labor, of producing a full crop this year, it mattered not what acreage might be planted. Every cotton man who did not see this inevitable condition was blind to truths which should have been as clear to him as the noonday sun.

The world is now face to face with a real, genuine cotton famine, with the world's supply far below the world's actual needs, and we will go into the 1924-25 crop year with the world swept absolutely bare of cotton to a point that many mills will have to curtail their operations merely because they cannot find the cotton with which to run their spindles and looms.

There is some talk that the world will not consume cotton goods at the higher prices of the raw material to a sufficient extent to make consumption of cotton equal to the production. That is a false position. The world will consume all of the cotton which will be available, regardless of the price, even if that price should be very much higher than present figures.

It is true that cotton manufacturers should unite in a very broad campaign of publicity to make consumers everywhere appreciate the fact that higher prices of cotton goods are absolutely essential by reason of the cotton famine which prevails. But the increasing consuming power of this country, growing apace as it is with the general employment of the people at high wages, and the better conditions of the farming population, will take the cotton goods made out of high price cotton whenever the manufacturers make the proper effort and educate the consumers to the real conditions.

Let it at the same time be understood that the South is not a loser by this short crop of cotton. Individual farmers and individual sections will lose heavily by the short crop; some farmers will be wiped out; but the aggregate value of the crop will far surpass what a 14,000,000 or 15,000,000 bale crop would have produced. If we had gathered a crop of 15,000,000 bales we would have had a surplus to add to the world's supplies, and every bale would have been a heavy weight to force down the price below the actual cost of production.

With cotton even at present prices, and they may go much higher based on the world famine in cotton, this crop and its seed will produce not far from $1,750,000,000; whereas a 15,000,000 bale crop would probably not have brought over $750,000,000 to $800,000,000. The South is the gainer by the small crop, measured in dollars and cents, of probably $750,000,000 to $1,000,000,000 over what it would have received for a big crop. The world will suffer for lack of cotton, but the South will receive an enormous profit by reason of the small crop.

Moreover, it will not be possible to produce next year a crop sufficiently large to meet the world's requirements and to lay up any stock whatever for the future. At the very best, with the boll weevil and labor conditions as they are, we cannot plant and cultivate and gather a crop next year sufficient for the actual requirements of the world and a needed small surplus over, and it has been well proven that there is no possibility for many years to come of any large increase in the production in other countries.

The cotton manufacturers of the world are to a very large extent responsible for the conditions which they now face. Most of them have for generations fought a living price for cotton. They have been told a thousand times that the only safety for their raw material was a price which would enable the grower to make a living profit. They fought this price. Lancashire especially fought it unceasingly and for 100 years has used every means in its power to break down and hold down the price of cotton. No pity whatever should be given to the Lancashire spinners in the desperate condition in which they now find themselves. They sowed the wind year after year, and generation after generation, and they are now reaping the whirlwind. If there ever was a short-sighted, narrow-minded, cruel, inhuman policy that prevailed in any great industry, it is the policy with which the spinners of Lancashire and of the continent generally fought to break down the price of cotton to starvation wages for the producers of the South; and, for that matter, for the producers of India, whose people are as a whole probably the poorest on the face of the earth.

One of the greatest economic crimes of history is the way in which European cotton manufacturers have helped to hold the cotton growers of the world in slavery worse than that which existed once in the English islands of the West Indies, and later in the South. Many New England manufacturers have been guilty of the same crime, but to their everlasting credit there have been other New England men who had humanity in their souls and were willing to see cotton bring a fair price.

We have in mind one pre-eminently respectable millionaire cotton manufacturer, posing as a religious and philanthropic leader, interested in a large number of mills, who has fairly frothed at the mouth whenever cotton went to a fair living price for the producer. He was willing to see his mills make great profit, but he was never willing to see cotton growers make a fair profit; and there have been hundreds just like him. Some Southern men, to their everlasting shame, have likewise been guilty of the same kind of disregard for the rights of others. They, too, have been willing to see many cotton growers impoverished provided

(Continued on Page 31)

British Looms Facing Crisis.

London.—England's great textile manufacturing industry is face to face with a crisis that threatens its very existence.

Due to high costs of raw cotton and decreased demand for cotton products, it is conservatively estimated that the cotton industry of England has suffered losses of nearly $500,000,000 since the present trade depression started.

In the great cotton manufacturing districts of Lancashire, as well as in other districts, there is great unemployment and depression and there appears to be a disposition to throw some of the blame on America, for its failure to lower the cost of raw cotton.

"The American cotton growers, in spite of the restricted demand, have been able to command a good price for their product, and doubtless have made their usual profits, if not the war profits," declares a report of the Amalgamated Association of Card and Blowing Room Operatives. "In spite of the reduced demand American cotton is still about three times the pre-war price, and there does not appear to be much prospect of any relief in that direction."

U. S. Scale Higher.

Arthur Preston, who recently made a tour of the cotton belt of the United States, reported to the International Cotton Federation that the United States is not able to produce cotton on a commercial basis low enough for the purchasing power of the consumer in England and abroad. Preston further declared that the world's cotton industry is faced with a serious shortage of raw material, and that the United States is not likely to be able to produce for some years to come anything like the quantity which would enable manufacturers to supply the quantities required, if a normal demand for cotton goods should set in.

The crisis is attacked from an entirely different angle by J. W. Newbold, Communist member of Parliament, who charges that the cotton magnates have indulged in "a colossal swindle" and have unloaded stock in their factories on the small investors, with full knowledge that the cotton industry in England was on a rapid decline.

"Eighty-five million pounds has been taken out of your pockets by legalized sharks," Newbold told a meeting of Lancashire cotton workers. "In return you have been presented with the cotton mills of Lancashire. You are told in the press every day that there is no hope for the cotton industry in Lancashire for years to come.

Saw Failure Coming.

"These people who sold the mills knew what they were doing. They knew that the cotton industry of Lancashire was finished so far as the capitalist system is concerned. They knew that they had got machinery going into India, into China and into Japan. They knew that they would be in a position within the course of the next few years to produce there nearly all the cotton required in the markets of the East, and that the mills of this country could not produce cotton unless wages were driven down and hours lengthened."

Remedies galore have been suggested for the pitiful condition of the cotton trade, the chief suggestion being that cotton growing shall be encouraged and increased in the empire's dominions.

While remedies are being considered, however, conditions in the industry are fast approaching those pitiful conditions which arose during the great cotton famine.

Power Company to Build Plant.

Spartanburg, S. C.—A. B. Groce, wealthy planter of Grove, this county, confirmed the report that the Southern Power Company, of Charlotte, N. C., has secured an option on 78 acres of his property one mile beyond Duncan, for the purpose of erecting a 40,000 horsepower steam plant. It was reported in the city that the company had already exercised its option and that Mr. Groce had received payment for the property. This Mr. Groce refused to confirm. He added, however, that the right of way for a spurline leading into the property has already been purchased by the Southern Power Company from W. R. Dobson, of Duncan.

Some three months ago in the office of the register of means conveyance revealed that the Southern Power Company had secured deeds to rights of way on land from Gastonia to Spartanburg. The Spartanburg Journal printed the names of the property owners who had deeded rights of way and also printed the statements of local business men who said that they believed the Southern Power Company was seeking entrance into this territory for the purpose of supplying power to cotton mills and other manufactories in this and adjacent counties.

New Textile Color Card Out.

The new color card of the Textile Color Card Association of the United States, Inc., for the 1924 spring and summer season has just been released for distribution in America and foreign countries. The card contains eighty-eight colors, prominent among which are the reproductions of ancient Chinese colors, such as imperial yellows, glistening jade greens, antique lacquer and sumptuous, exotic blues of the Ming and Chiing dynasties. A little brochure, which accompanies the card, tells of the inspiration for the new color motifs which will influence the trend of fashion. A supplementary folder shows a yellow named Jasmine and a light beiege shade called flax, which have been standardized by the association for the cotton industry at the instance of both the National Association of Finishers of Cotton Fabrics and the Converters' Association.

Coal Dye Imports Increase.

Washington.—Imports of coal tar dyes through the Port of New York for November totalled 278,673 pounds, valued at $289,689, as compared with 267,556 pounds imported during October, valued at $257,084; according to the monthly report of the Chemical Division of the Department of Commerce.

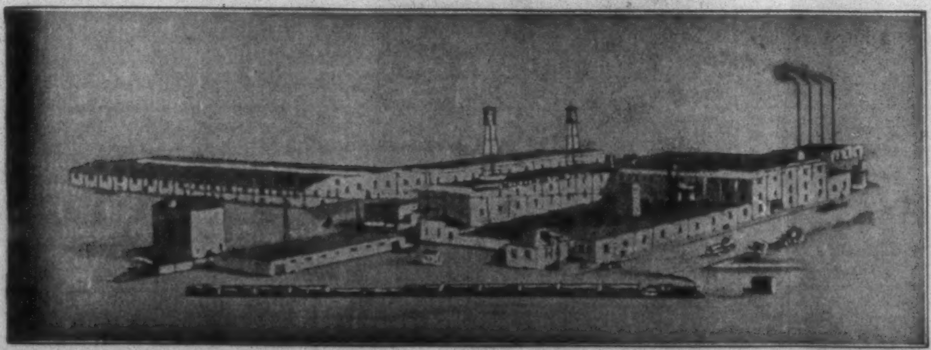
In addition to the above imports of dyes through the Port of New York, the following imports were reported for November through Boston and Cincinnati; Boston, 10,677 pounds. valued at $13,461; Cincinnati, 1,479 pounds, valued at $376.

The five leading dyes in quantity imported were indanthrene yellow G, 21,013 pounds; indanthrene golden orange G, 15,788 pounds; erioglauoine, 11,802 pounds; indanthrene golden orange R, 11,478 pounds; and indanthrene blue G C D, 10,920 pounds.

Chinese Organization Wishes to Purchase Drills.

The Textile Division has received an inquiry from an American consulate in North China on behalf of a semi-official organization which is interested in purchasing annually fairly large quantities of drills. A sample of the drill now used, which is somewhat inferior to American makes, has been submitted. It is understood that this organization has considerable revenue and will also be in the market for other classes of textiles. A sample of the drill, together with other details relative to this inquiry, will be furnished interested American houses upon request to the Textile Division, Bureau of Foreign and Domestic Commerce, Washington, D. C.

VICTOR MILL STARCH – The Weaver's Friend



It boils thin, penetrates the warps and carries the weight into cloth. It means good running work, satisfied help and one hundred per cent production.

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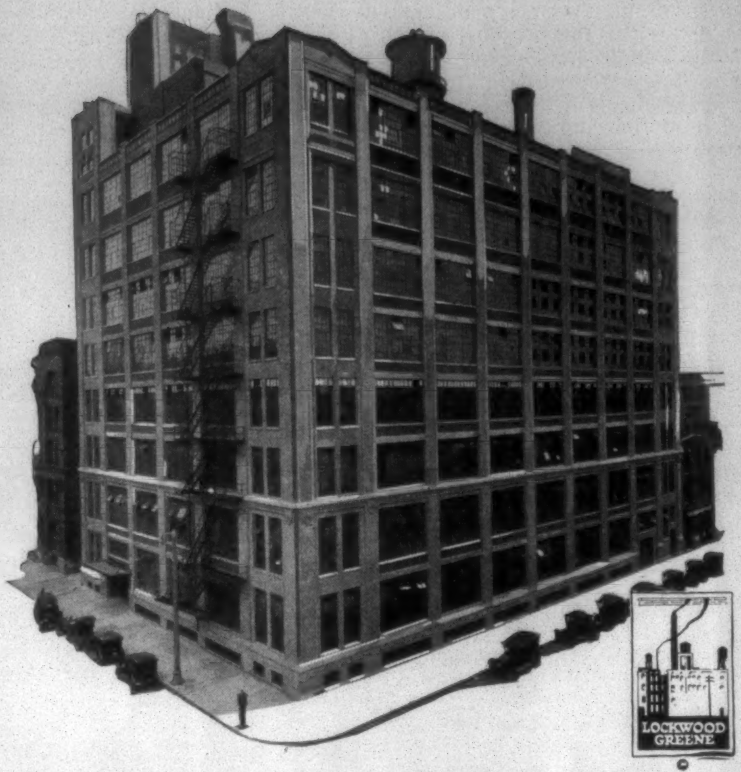

Building with foresight.

A Model Manufacturing Efficiency

THIS is the new dye-house and finishing building of the Phoenix Hosiery Company at Milwaukee, **one of the largest single units in the country devoted entirely to hosiery finishing.** The building is a model of manufacturing efficiency.

Location of the dye-house at the top of the building assures a maximum of natural light and ample ventilation, and keeps the vapor and fumes from other parts of the building. Stock is raised at one lift from the undyed stockroom in the basement to the dye-house on the seventh and eighth floors, and then is carried by gravity to the other operations on the floors below.

Boarding, mating and boxing rooms are located on the fourth, fifth and sixth floors, so arranged as to provide a minimum amount of handling of boarded goods.

Meeting difficulties, and in many cases turning them to advantage, is one part of the service of Lockwood, Greene & Co. In overcoming the obstacles encountered in designing the Phoenix Hosiery building, Lockwood, Greene & Co. were aided by years of experience as textile mill engineers and managers. More detailed information about this building and others of equal interest will be provided on request. A Lockwood-Greene representative will be glad to call and discuss your own building problems.

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ENGINEERS

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BOSTON ATLANTA CHICAGO NEW YORK
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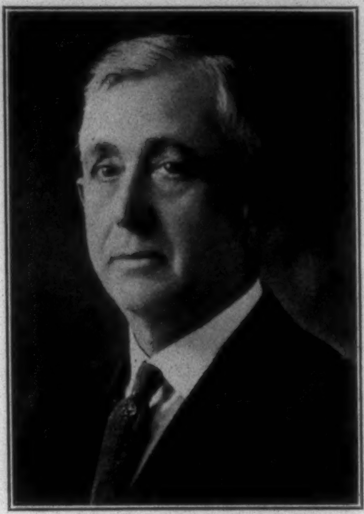
WHO'S WHO
AMONG TEXTILE SALESMEN

HARVEY A. DETWILER.
(Valvoline Oil Company)



HARVEY A. DETWILER.

Harvey A. Detwiler, of Philadelphia, is not as well known in the South as formerly because he now confines his trips to about two short ones a year, but while he was actively in the field he made many warm friends and there is no salesman whose visits are more welcome.

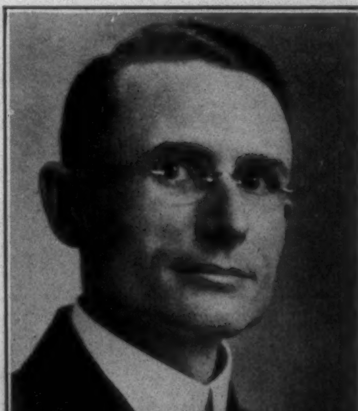
"Det," as he is usually called, was manager of the Birmingham Tack Works, at Birmingham, Ala., about 1890, and then went into the real estate business.

In 1896 he went with the Valvoline Oil Company and for two years covered Louisiana and Texas. Then he was transferred to Charlotte and for the next three years sold the lubricating oils to the ecotton mills of the Carolinas, but in 1902, they found that his services were required at the head office in Philadelphia. Since then he has taken enough time two or three times each year to visit the Southern textile industry and with these short visits has managed to hold a very large volume of business.

As a story teller "Det" has few equals, and because of invariable good humor and personality his visits are enjoyed.

He has covered the mills of the Carolinas for more than a quarter of a century and takes pride in the fact that he was never sick a day during that time.

JOHN H. SPENCER.
(Barber-Colman Co.)



JOHN H. SPENCER.

John H. Spencer was born on a farm in York county, South Carolina, on September 5, 1879, and that being before Barber-Colman invented tying machines he had considerable experience hand tying plow lines on mules.

He attended Clemson College and then spent two years "learning" in the mills at Lancaster, S. C.

His first job with Barber-Colman Company was an installer and demonstrator in England and he must have done very well while in that country, for his career has been one of steady promotion since then.

For a while he was foreman of their testing department and then Southern superintendent of installation.

Later he was promoted to manager of the Southern office with entire charge of the Southern territory and because of his personality and salesmanship has made good.

He has his headquarters at Greenville, S. C., with a large organization of salesman and installation men.

John has been an active factor in the textile development of Greenville.

He was a member of the committee of the Southern Textile Association that put on the first Textile Exposition at Greenville and he has been active in the other Expositions.

He is married and has one child. His membership in the Greenville Rotary Club dates back a number of years.

Clark's Directory of Southern Textile Mills
Contains Complete data relative to Southern Mills
Pocket Size Revised Twice Yearly
CLARK PUBLISHING CO.
CHARLOTTE, N. C

New Community Work Plan at Hermitage Mills

A new plan for the handling of welfare and community work has been worked out by the Hermitage Cotton Mills, Camden, S. C., of which R. B. Pitts is president. The plan has been under consideration for some time and is designed to work along lines that are entirely acceptable to the mill employees and that will aid in real community progress. This new plan is outlined in the Camden Chronicle as follows:

"One of the most perplexing of problems confronting managements of Southern cotton mills has been that of community welfare and community government for those mills not located in incorporated towns. When pursuing the usually accepted policy for this work to be handled or directed by the mill management, either directly or through agents, a condition has resulted in which community spirit has been largely subordinated to the ideas of one or several mill executives, and the mill community has largely been pauperized as to individual leadership. On the other hand, mills where the managements have not taken active personal interest along these lines, and fostered the social, athletic and recreational activities of their communities, have found themselves eventually with less efficient, less happy and less intelligent workers. There has been on the one side the danger of suppressing community spirit through the dictation of executives as to community activities, and on the other side the danger of a thoroughly unorganized inefficient community body. The employment of capable trained community agents from the outside has been at least a partial solution of the problem, and certainly has tended to reduce the evils inherent in the situation, but the employment of these outside social directors has resulted in only partial success, except in those cases where such directors were fortunately possessed of unusual tact and a great degree of adaptability to cotton mill village conditions.

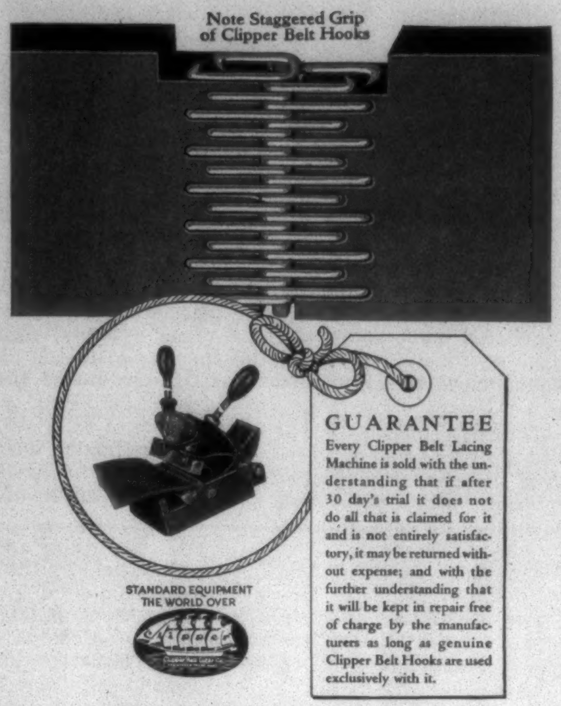
"The managers of the Hermitage Cotton Mills, Camden, South Carolina, have made a serious intensive study of this problem for some years with a view toward working out a solution thoroughly acceptable to the community itself, and one which would allow a free untramelled development of the community. It was long ago determined by thoughtful mill executives that the mere expenditure of considerable sums of money did not provide any successful means of community progress and community development, especially when the entire work frequently lacked proper supervision and direction, and more often than not of a nature unappreciated by the community.

"Out of their careful investigation and observation the Hermitage Cotton Mills have been able to inaugurate a plan for the handling of various strictly community interests which it is believed will very largely meet the many needs existing in the situation, though not having any other existing plan upon which to build, the ideas will be developed as experience is gained through operation of this plan. An association has been formed, of which every employee and every adult resident of the community is a member. Detailed by-laws with strict regulations have been drawn up and adopted by the association. The association has its own set of officers and directors, none of whom are the mill managers or superintendent. Although as organization it has been in operation only a short time, the accomplishments and the smoothness with which it is operated give promise of the fulfillment of all and even more than had been expected, and the actual work is handled in such manner that thee percentage of efficiency of accomplishment in proportion to the amount of money expended is exceedingly high.

"This association has entire charge and control of all social, athletic and recreational activities in the community, and all cases of sickness, financial distress and emergencies of any such nature are handled by this association through the governing board and officers. The mill management for their part place at the disposal of the association each month a fixed sum which has proven ample for all the various requirements, and this fund accumulates from month to month to meet any unforeseen emergency. Under this arrangement the mill management takes no part whatever in the expenditure of these funds nor the handling of the individual matters requiring attention or expense, other than a readiness to assist and advise when called upon to do so. Under this plan the Hermitagee Cotton Mills village is an independent, self-governing, self-supporting community in which the living conditions, the health and the happiness depend upon the individual members themselves and their own elected leaders.

"In actual operation this association has appointed one of the long resident members of the community as active director of the work, who, through intimate knowledge of all the individual needs of the community, has been able to co-ordinate the work with an entire absence of friction, resentment and lack of response, which obstacles have so frequently been met by one less familiar with existing conditions, and in less close sympathy with the difficulties and aspirations of the actual mill workers themselves. During the short period of its operation, the Hermitage Community Association has been such an unqualified success in all directions that the mill management is most satisfied with results, and would consider suggesting no changes other than proper progress and development as experience is gained in the various details of the work of the association. It is not believed that the Hermitage community would again be satisfied with any plan of com-

(Continued on Page 33)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Cotton Crop Estimated at 10,081,000 Bales.

Washington.—Estimating the total cotton production for 1923 at 10,081,000 bales, the Government reported a short crop, as compared to the normal average, for the third consecutive year. The estimate for the 1923 crop made by the Agriculture Department was greater than the production of the past two years by 319,000 bales over 1922 and by 2,000,000 over the 1921 crop, but was more than 1,000,000 bales below the five-year average for 1915-1919 and 4,000,000 bales below the 1910-1914 average.

The Government's final estimate for the 1923 crop was believed to be a little above the general expectation of the trade, although it was said that a number of the estimates compiled by private reporting agencies were very close to the figure arrived at by the Agriculture Department. The production estimate made was about 319,000 bales less than the Government's November figures and well below the high point of approximately 11,000,000 bales estimated in October.

The official forecast of the crop reporting board of the department stated that from the present advancement of picking and ginning considered in connection with the actual ginning to December 1, the total production of cotton in the United States for the season 1923-24 would amount to 4,821,333,000 pounds, not including linters, equivalent to 10,081,000 bales of 500 pounds gross weight, 478.3 pounds lint and 21.7 pounds bagging and ties estimated per 500-pound gross weight bale.

The average running weight per running bale for 1923 was estimated at 493.7 pounds gross, as compared with 501.7 pounds in 1922, and 504.3 pounds, the average for the preceding five years.

The average farm price per pound of lint cotton to producers on December 1 was given by the Department as 31 cents as compared with 23.6 cents a year ago. The December price was the highest since the 35.6 cents a pound figure in 1919. On the basis of the department's figures the value of the 1923 crop would be $1,495,000,000, as compared with a value of $1,194,000,000 for the 1922 crop, estimated on the basis of 23.8 cents a pound for the yield of that year in terms of 500-pound bales.

Climatic conditions and insect activities were held by the department to be responsible for the reduction of nearly 1,000,000 bales in the final 1923 estimate as compared with the forecast of 11,000,000 bales for the year made in October. The October report was based on figures obtained in September and generally unfavorable weather and heavy rains occurring subsequently in the Southwest shortened the crop. Exceptional damage to grown bolls by the boll weevil, the results of leafy worm ravages, together with the heaviest abandonment on record all combined to pull down the forecast.

The rains were felt most severely in Arkansas and Oklahoma, while the boll weevil ravages made themselves felt particularly in Oklahoma and Georgia and in parts of Florida and Mississippi.

Details of acreage harvested and abandoned and of yields per acre will be shown by the department in its general crop report which will be made on December 17.

Issuance of the Government's final cotton figures for the year are expected here to put an end to the uncertainties with which the present crop has been regarded and relieve the tension which it is reported has been manifested in cotton trading circles during the past few weeks.

Detailed figures issued by the department place total production (cotton ginned) for the crop of 1922 at 9,761,817 bales (500 pounds gross); for 1921, 7,953,641 bales; for 1920, 13,439,603 bales; for 1919, 11,420,763 bales; for 1918, 12,040,532 bales; for 1917, 11,302,375 bales, and for 1916, 11,449,930 bales. The average production for the five years 1910 to 1914 was 14,259,231 bales, and for 1915 to 1919 the average was 11,481,084 bales.

The reports of the Crop Reporting Board do not include "linters," which are a product obtained at mills from the seed. The production of "linters" is about 6.2 per cent as much as the lint production (average 1917-1921).

The estimated production in 1923, with comparisons by States, follows:

		—Bales of 500 Pounds, Gross Weight—		
			—Census Ginnings—	
State—	Pounds lint, 1923.	1923.	1922.	Five-year av. 1917-1921.
Virginia	23,880,000	50,000	26,515	20,778
North Carolina	486,642,000	1,020,000	851,640	800,405
South Carolina	379,692,000	795,000	492,535	1,322,114
Georgia	281,489,000	590,000	714,998	1,573,612
Florida	5,728,000	12,000	25,021	22,443
Alabama	286,560,000	600,000	823,498	654,934
Mississippi	293,540,000	615,000	989,278	960,163
Louisiana	174,360,000	365,000	343,274	438,130
Texas	2,055,768,000	4,290,000	3,221,891	3,002,869
Arkansas	296,236,000	620,000	1,011,457	971,390
Tennessee	105,072,000	220,000	390,994	301,460
Missouri	54,947,000	115,000	149,000	67,162
Oklahoma	296,546,000	620,000	627,419	873,936
California	*23,422,000	*49,000	†28,243	58,115
Arizona	39,765,000	83,000	46,749	57,127
All other	‡17,686,000	37,000	19,310	7,745
United States total	4,821,333,000	10,081,000	9,761,817	11,231,383

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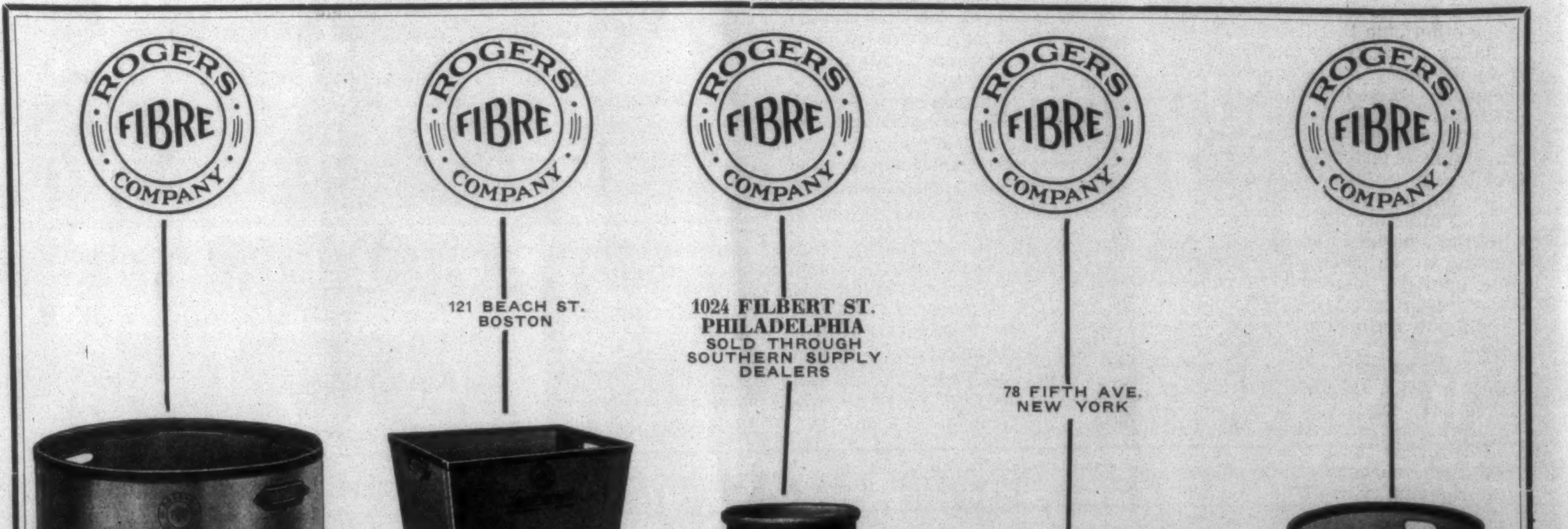
* Above 41,108,000 pounds, equivalent to 86,000 bales additional being grown in Lower California (Old Mexico). † Includes about 7,000 bales of the 58,000 bales grown in Lower California (Old Mexico). ‡ Including New Mexico.



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PENETRATION

THERE is much difference between the power possessed by various liquids to penetrate solids.

As an illustration; accurately measure a drop of one liquid and a drop of another. Place each drop upon a piece of paper of the same quality, and see to it that the paper lies perfectly level. It is thoroughly possible for one of these liquids to spread itself over an area several times larger than that over which the other will spread itself. While the test thus described is one of common practice it is not necessarily a certain test for penetration, for it may be possible that the paper used contains more or less of a filler or gloss and that property which permits a liquid to spread itself over the largest non-poreous area is not necessarily the property which permits it to penetrate interiors, although there is some relation between the properties.

Let us take the process of decolorization of oils by filteration. In this process the oil is passed through columns of filtering material, usually Fuller's Earth or bone-black. That oil which penetrates best filters the easiest and with the least cost. But such an oil would cut a sorry figure if used in a textile softener, because it also parts very readily with its coloring matter which is fine carbon pigment in mineral oil and blood pigment in animal oils.

An easy filtering oil possesses the power to penetrate in itself, but it does not possess the power to carry anything with it in penetrating action.

The tendency of the yarn is to filter or strain, from the liquids mixed with the size, the solid ingredients in the size and leave them deposited on the surface. This is what causes all of the trouble in the conditioning process. It causes the warp to become brittle or pipy and break on the beam, and is the cause of not carrying the size through to the cloth.

The imparting to an oil the property of penetration is not a problem which is identical to the manufacture of a conditioner, for cotton goods, but enters more or less into all of the industries.

All case-hardened metal must be penetrated by carbon gases; wool must be penetrated by an oil in preparing it for the cards; leather must be penetrated by an oil in the currying process; silk must be penetrated by an oil or soap in the process of conditioning. But each of these processes of penetration carry with them some peculiar requirement identical to itself and to no other.

For instance with the preparation of wool, the oil must be a ready solvent for the natural greases of the wool, a corrector of electricity and scour readily. With leather the oil must penetrate into every crevice of the hide, lubricating the fibres and carrying with it a certain amount of solid matter such as stearine. Products which are in themselves oils at certain temperatures and which are readily soluable in oil in certain proportions.

But when it comes to conditioning cotton warps, the conditioner must carry through to the interior of the yarn, in a uniform manner, the starch, etc., which compose the size. It must not release the size by a filteration process and permit it to remain on the surface, neither should it release the size and permit it to ooze to the surface of the warp when the warp is under the tensile strength to which it is subjected on the loom.

Thus it may be comprehended that in a Warp Conditioner property of penetration plus the property of dissolving the size are desirable characteristics. And we might appropriately add, plus the property of staying put.

Thus it will be appreciated that the manufacture of oleagenous products for one industry is more or less related to the manufacture of those products for all industries and HOUGHTON'S WARP CONDITIONER is the final result of many years' experience in the manufacture of oils possessing soluable and penetrating proportions.

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Oils and Leathers for the Textile Industry

Practical Discussions by Practical Men

To Duplicate a Piece of Cloth.

Editor:

If a weaver wants to duplicate a piece of cloth, what information, based on an analysis of the sample, must he have in order to figure the construction of the piece he wants to duplicate?

Loom.

Size of Ply Yarn.

Editor:

The inability of some of the knitting mills to sell their goods at a profit based on present causes, is, I understand, causing a tendency to substitute single yarns for ply yarns. For instance, on knitter, in place of 40s-2 ply is substituting single yarns of about 20s. If we used two yarns No. 40s twisted together, it would weigh more than one of No. 20s. I would like to know how to figure what single yarn would correspond in weight to 40s-2 ply?

Single Yarn.

Threads Per Inch.

Editor:

Is there any set rule for figuring out the number of threads that can be woven into one inch of cloth? For instance, how many threads of 18s warp, two-ply, can be woven in one inch of plain goods, using the same number of yarn in the warp as is used in the filling? I want to put in as many ends as possible without hurting my running work.

Second Hand.

A Question on Lap Weight.

Editor:

I would like for some of your readers to answer the following for me:

Running 55 hours per week, our mill uses 100,000 pounds of finisher laps per week. On the intermediate and finishers, the waste is 5 per cent. What should the lap weigh for the seven breaker pickers produce the required amount? The fluted rolls are running at 9 r. p. m. and the stoppage is about 16 per cent.

Section.

Training New Help.

Editor:

In trying to check over some of the things that would help us run our mills more efficiently, it occurs to me that we are not giving enough time to systematic training of new help. Most of us start in a new spinner by putting her with one of our good spinners and letting the new girl learn from the trained spinner. No matter how good a spinner is, she is more than likely to have some fault and the chances are that the new girl will pick up some bad habit. Most of us do not check up on new spinners carefully enough to know just how they are doing.

I know that some of the mills have tried the system of letting all new spinners work under one expert spinner who spends all her time teaching new help. This strikes me as a step in the right direction. If we took one or two good spinners and showed them exactly how we wanted them to train new girls, the results should be better. I believe such teaching spinners should be paid extra for their work and should be checked up frequently.

I would like to hear from any spinners who have tried this method of training new help.

Spinner.

The Ford Mill.

Editor:

The experiments being made by Lockwood, Greene & Co. for Henry Ford, which are designed to cut out some of the processes in the mills, are naturally very interesting to superintendents and overseers. I have been very much interested to hear of this work and have talked with a good many mill men about it. It is a mistake, I believe, to jump at the conclusion that what Ford is trying to do is impossible. I do not always believe that any ordinary mill could change their equipment to meet the Ford layout, but the fact that Ford would take all his goods himself and that he is making a special fabric for a special process makes it hard to compare the Lockwood-Greene experiments with conditions we find in the mills. Ford's proposal differs so much from the standard mill practice that we must not be quick to say it cannot be done. I believe that is plenty of room to work out new processes to cut out some of the work now done in spinning and weaving cotton. Anyway, as long as the work is now only along experimental lines it would be a good idea for all superintendents and overseers to know what the final results are going to be.

We know that a great many mills are now using vertical openers set in tandem and they certainly do the work of cleaning that is usually done on the pickers. Vertical openers can be used to good advantage when set in triplicate or quadruplicate, except where very high grade cotton is being used. On numbers from 8s to 13s, where the weight of the roving does not vary too much, a good many Southern mills use only one process of drawing.

As I understand it, Lockwood, Greene & Co. are going to find out for Mr. Ford whether we can cut out the pickers. then feed the cotton to the cards so that it eliminates the necessity of lapping the cotton and then deliver the cotton from the cards to the drawing frames wtihout using the coiler and can. If they can do this, it will effect a great saving for all the mills. It would cost so much less to build a mill without the picker room and machinery and the labor cost would be much less. The whole plan, if it can be worked out, will give greater production at less cost and that is the trick that all of us are trying to learn.

I would like to hear the opinions of other superintendents and overseers on the proposed Ford mill.

Flivver.

J. T. Broadbent, vice-president and treasurer of the Standard Textile Products Company, recently stated in the Daily News Record, his opinion of the proposed short-cut which is being tried out for Mr. Ford. Because "Flivver" will doubtless be interested in what Mr. Broadbent says and other men as well, we give below an extract of his statement.—Editor.

"Regarding the question as to the practicability of the plan outlined by Lockwood-Greene relating to the radical departure from usual cotton mill processes to be used in the proposed cotton mill for Henry Ford, would state there is no doubt in the writer's mind but what a fabric such as they refer to (namely, 53-inch 1.05 yard sateen with 13s warp and 9s filling), can be made by an abbreviation of the processes now employed, and considered essential, in the generally accepted layout of cotton mill practice.

"As a matter of fact, from the information given in the article, there is nothing extremely radical so far as the writer can see on processes prior to the loom, particularly when the equipment is to be utilized on the same warp and filling yarns and the same fabric construction on every loom every day in the year, augmented by the advantage of having the fabric entirely consumed by the same corporation as an item of raw material for another product.

"As stated above, no details are given that would indicate what may be the abbreviation of processes after the fabric leaves the loom, but the writer fully believes that the Lockwood-Greene Company can do what they are proposing to do in the organization of processes preceding the loom; particularly in connection with the construction of the filling yarn. This statement is not made on assumption but on the fact that the writer is aware at this time of filling yarn of approximately the same counts as suggested now being made with even less processes than the Ford plan proposes to use. This plant, in operation at the present time, uses the tandem vertical openers, connected with the bale breaker as proposed by Lockwood-Greene, eliminating the usual picking processes. It is also using a direct automatic feed of the product from the openers in loose open condition to the ecards, and even goes one better than the proposed Ford method, from the fact that the drawing process is entirely eliminated and the product goes direct from the cards to the slubber. In this particular plant also for the filling yarn, the product goes directly from the slubber to the spinning frame, which eliminates one process of roving which they propose to use in the Ford plant.

"From the above, you will notice that there are processes less than the Ford plant proposes, namely, the drawing frame and one roving processes. This is a practical operation for making a filling yarn owing to the fact that there is no excessive strain on the filling yarn during the process of weaving. On the other hand, the warp is made by practically the same organization of processes (including the drawing and roving frame processes) as outlined in the Ford layout.

"Without going into a discussion of the technical differences on the processes that can be used in the manufacture of different classes of textile fabrics, it must be remembered that in equipping a cotton mill for the purpose of supplying a need such as the Ford plant is intended to supply, some radical departures may be made in the shape of elimination of processes. First—because a fabric made in this particular plant would probably be accepted by the Ford automobile organization, and used in connection with the Ford tops and upholstery fabrics that would not pass the Ford specifications if being purchased from an outside mill.

And, second—a fabric of this kind, not having to be put on the market in competition with other fabrics made on the conventional layout of cotton mill processes, does not need to have the characteristics that would be called for in the general commercial fabric which is to be used for several different purposes, and can consequently be made cheaper.

How to Determine the Cost of Belt Creep and Slip Combined.

To figure the cost of your combined belt slip and creep you must first determine the percentage of slip and creep, which is a simple matter if conditions in the drive are such that the driven pulley can be operated for a while "without load."

When no power is transmitted by a belt there is no slip or creep, of course. The driven pulley, then, will rotate as many times per minute as it is possible for it to rotate.

When the belt is transmitting full load, however, there is bound to be belt creep and possibly some slip, and the driven pulley will not rotate as rapidly as when "unloaded." The difference in r. p. m., then, divided by the r. p. m. made "unloaded" multiplied by 100, gives the combined percentage of slip and creep.

For example, let us say that a given driven pulley runs 340 r. p. m. in an unloaded state. When the belt carries full load, though, it makes only 320 r. p. m. What is the combined percentage of slip and creep?

Applying the above rule we get:

$340-320=20$;

$20\div340=0{,}059$;

$0.059\times100=5.9$ per cent combined slip and creep.

Now, if this is a main belt drive it means that you are losing 5.9 per cent of your coal pile through belt slip and creep. Thus if you spend $10,000 per year for coal you are losing:

$10,000×5.9 per cent=$590 per year due entirely to slip and creep.

Why not apply some good belt treatment and save most of that Spending a few cents to save several hundred dollars is surely a good investment. Why not take good care of your belts. Surely, $590 per year is worth while.

Japan Potential Market for U. S. Knit Underwear.

There is an excellent market awaiting American manufacturers of knitted underwear in Japan, judging from the number of inquiries received recently from that country by the Associated Knit Underwear Manufacturers of America. It is believed that the high quality of American relief supplies shipped to the Orient following the earthquake served to stimulate the interest of the Japanese in merchandise produced in the United States.

In the past Great Britain largely controlled the sale of underwear in Japan, but that condition, according to Japanese importers, was due to the fact that America has not made sufficient effort to introduce her products there.

"At present," says a prominent importer at Kobe who has inquired for American merchandise during the past week, "the underwear business of this country is almost entirely in the hands of English manufacturers, but this business can and should go to America, provided always that American manufacturers take the necessary steps to put their products on this market. The English manufacturers send their representatives to Japan regularly and do an increasing business. It is not that any English manufacturers are favored, or that there is any discrimination whatsoever. The business goes to England merely because the American manufacturer does not make a whole-hearted effort to get the business.

As pointed out by the American Red Cross at the time of the earthquake disaster, Japan has always been partial to knitted underwear, while efforts to introduce woven garments have been unsuccessful because the Japanese preferred the more elastic and more comfortable knitted undergarments. One reason for this preference for knitted underwear, it is thought, is that such garments form the sole body covering for a large portion of the coolie classes.

During the warm period the Japanese coolie wears nothing but a suit of knitted underwear, a straw hat and a pair of wooden sandals. In the winter he augments this costume with a kimono. The coolies find knitted underwear offered for sale in the foreign shops, and as, to a coolie, more than one layer of apparel is entirely superfluous except in cold weather, he wears his suit of knitted underwear as his sole article of apparel, entirely oblivious to the incongruity of his appearance to Occidental eyes.

It was because of this custom, it is explained, that in its appeals for aid for the earthquake victims the Red Cross stressed knitted underwear as the principal need, as of even more importance than food or other article of clothing. As explained by E. T. Pickard, chief of the textile division of the U. S. Department of Commerce at the Underwear Manufacturers' Convention at Utima recently, the commercial possibilities of earthquake relief work were realized and only the finest of American merchandise was shipped to the sufferers in Japan by the Red Cross, with the expectation that quality would make its impression upon consumers in that country.

That the desired result was achieved is evidenced by the fact that during the past week alone the Associated Knit Underwear Manufacturers of America have received inquiries from four leading Japanese importers concerning the products of their members.

New Type Hosiery.

Factors in the hosiery market, who give considerable attention to new developments in the manufacture and improvement of hosiery, have been considerably interested by the appearance in retail shops throughout the country of men's accordion ribbed half hose with a foot built like a shoe.

The new article, which is the product of the Hirner Hosiery Company, of Allentown, Pa., is described as "full fashioned in the knitting." In the true sense of the word, however—if the accepted meaning of full fashioned hosiery is considered—the new foot is not "full fashioned" as it has no seam.

The foot, however, is actually fashioned in the knitting to conform to the shape of the foot and ankle of the wearer. Knitted in four sections, the fot is set at a right angle to the leg, as in the case of a shoe. The result is said to be elimination of all the wrinkles across and above the instep. The foot is detachable.

The hosiery, itself, which is being distributed to retailers by the Robischon Corporation, of New York, is an accordion ribbed article, seamless. It is produced in silk and lisle and silk and wool, the former being quoted at $11, and the latter at $13. It has a narrow, double elastic ribbed top, so that the entire leg is of one weave and material. The ribbed effect extends only a half inch below the tops of oxfords, where it is joined to the shoe-shaped foot.

Fixers Club is Guest at Dinner.

Greenville, S. C.—The Fixers Club members of Monaghan Mill were the guests Friday night of a banquet given at the Y. M. C. A. building. The club is a group of about 100 men, who are employed as foremen of departments in the mill.

J. C. Montjoy was toastmaster and presided over a most interesting program. Short talks were made by President T. M. Marchant, R. D. Ballenger, A. H. Cottingham and George Harrison.

Preceding the speaking several feature events weree given by various organizations or persons of Monaghan Mill. The Monaghan Band rendered several selections following the banquet proper which were well received.

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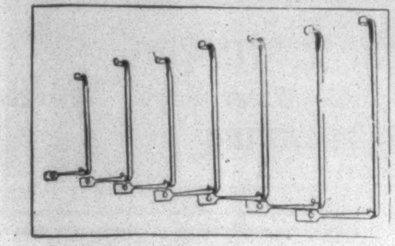

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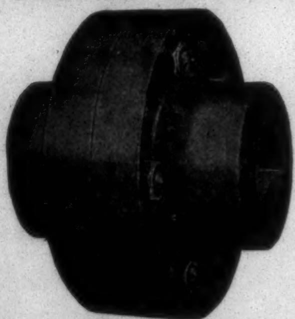

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Cloth Conditioning

The following paper on the conditioning of cloth was read at the recent meeting of the New England Textile Dyers' Association and the National Association of Textile Finishers at Shawsheen Village.—Editor.

I wish to take up just one property which textile fibres possess in common with other organic substances; namely, the property they possess of containing atmospheric vapor when they are in normal condition. Nature has provided living organisms with microscopic cells, which cells contain atmosphere If through any means the fibres are permanently deprived of this atmosphere, they become dead, and lose many valuable properties, such as kindness of feel, luster strength and elasticity.

Air always contains some water vapor, derived through evaporation from water surfaces and vegetation, but this water vapor is entirely different from liquid water. It is not tangible; it is in chemical combination with the other constituents of air. The higher the temperature, the more water vapor the atmosphere can contain. Consequently, if a high temperatured air is suddenly cooled, the air at the lower temperature is not able to hold as much water vapor as it did before, and the result is precipitation or rain.

Now for the application of this law to textile fabrics. All textile fibres, whether silk, wool, or cotton, or any other fibre, contain in their natural state a certain amount of atmospheric vapor, which is just as essential to their structure as their other components. This atmospheric content varies widely with different fibres, but may constitute from 5 per cent to 20 per cent of its weight, depending on the quality and the stage reached in manufacture. For example, the raw wool from which a cloth is made often normally contains twice as much atmosphere as the cloth. Depriving the fibre of its atmosphere distinctly deteriorates many of its valuable properties, and reduces its weight and dimensions.

Unfortunately dry heat which is so necessary in manufacturing has the effect of depriving the fibre of its natural condition, so it is extremely important to restore this condition as soon as possible after any dry heating process, not only for the purpose of getting the best in quality, but also in view of the additional product which will be obtained.

Many manufacturers think that cloth will regain its normal atmospheric content by merely laying for a day or two, but this is a fallacious belief. Fifty pounds of woolen cloth would hold all the water vapor contained in a room 20 x 20 x 15 feet, when the temperature was 60 degrees and the air saturated, a condition which never obtains. In fact, during the winter season, when artificial heating is used, and windows closed, most finishing rooms are extremely dry, and the air is more apt to draw moisture from the cloth than to give it up to the cloth. Another thing to bear in mind is that the parts of cloth most exposed to the air will absorb air quicker than the parts not exposed. This tends to give a permanent difference in color, the part conditioning quickly becoming a darker share than the part conditioning more slowly. This explains in a great measure dark edges and dark ends.

For all these reasons cloths should be conditioned uniformly, through natural absorption of evaporated moisture, and under a slight tension, so that the swelling which takes place in the fibres and yarns as they absorb atmospheric vapor will be taken up. This will have the effect of not only causing the cloth to be kinder in handle and smoother, but will at the same time increase the length and width of the cloth, in addition to bringing the weight to normal. The cloth will also be much better set, and will not shrink so much in sponging, notwithstanding the increase in dimension. The swelling of the yarns produces a binding effect at their intersections, which gives a firmer and better set cloth.

Of course, in what I have said, I am only alluding to conditioning through natural absorption of atmosphere. 'Spraying, steaming, dewing, or hanging goods in a saturated atmosphere constitute but a crude way of adding weight, honest or otherwise.

The true manufacturer's first interest should be, of course, to produce the highest quality of goods which the material he uses will permit of, but at the same time, he should not contemptuously pass up the large financial returns which intelligent conditioning of the finished fabric will produce.

On woolen and worsted cloths correctly conditioned as they come from presses or dryers, the expansion of the fibres will ordinarily cause an increased length and width, running from ¾ to 1 per cent. Not much, you will say, on an individual piece, but even with a 100-loom mill producing 2,000 yards per day, or 600,000 yards per annum, an additional product of 6,000 yards a year valued at, say, $2.50 per yard, would amount to $15,000 per annum, sufficient to pay a liberal dividend on the capital commonly employed for a mill of this size. The additional dividends from uniform weight and quality cannot be expressed in figures, but often will surpass the former in value.

In cotton goods and silk goods, all the advantages of correct conditioning which apply to woolen and worsted goods are just as evident. The common practice is to put out such fabrics as ginghams, sheetings, prints, domets, etc., in an abnormally dry state. With no additional material, and practically no additional labor, it is perfectly possible, through atmospheric absorption to increase the finished product from 1 per cent to 3 per cent, and at the same time greatly improve the quality and strength.

Thus a 1,000,000-yard product of cotton goods can readily be converted into 1,010,000 yards of much improved quality.

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(Continued on Page 30)

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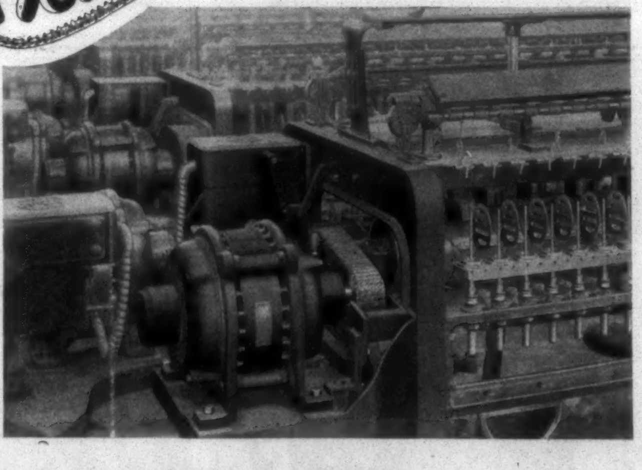

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Organizing the Human Element for Safety*

In establishing a permanent safety program in a textile factory it is first of all essential to "sell" the idea to the employees. There is an opinion among average employees that anything brought into a mill from "on high" is an attempt to "put something over on them." For this reaosn it is very necessary, in bringing in a program of this kind, that it be done ostensibly through the employees, thus removing one of the obstacles confronting the management of the mills in undertaking such an idea. In our mills the first step was to invite groups, representing different departments and crafts, to come together. When this was brought about it was explained to them that the program about to be introduced in the mills must be endorsed by themselves, as it is the employee who suffers the most from accident and, as it had a very keen significance to him socially and domestically, his duty was to devise ways and means whereby accidents might be reduced in his department. The first effort was thus made to build up a safety organization.

First of all, with the permission of the local management, representatives of each mill and department were assembled during working hours. The safety engineer explained to them the purposes of the meeting, suggestion cards being placed in the hands of every man and woman present on which they were to write their ideas of the risks and hazards encountered in the course of their employment in the mills. When the employees found out that they were vested with this advisory right and suggestive power, it was not very difficult to get them interested in the idea of safety, and in requesting that a program be installed. Groups of the employees were formed into committees from the mechanical and non-mechanical departments in the mills, and suggestions began to come in from them and were discussed at the appointed meetings of the committee. All suggestions that met with the approval of these committees as being worthy of further consideration were later taken up and discussed by committees of foremen from the mechanical and non-mechanical departments, who were in a position to judge whether the recommendations were worthy of being carried out. There are instances sometimes where manufacturing problems, unknown to the ordinary operative, make it impossible to adopt some suggestions, but when suggestions are received by a foremen's committee that tend towards the safety and welfare of a department, the suggestions are approved and sent to the management of the mill, composed of the agent and his superintendents, who determine whether to say that when the first groups of the employees saw the mechanical departments of their respective mills, working within a few days on suggestions they had made, it encouraged them to bring in additional safety suggestions from time to time, thus reasonably solving the problem, so much so, that in the Lawrence mills of the American Woolen Company, in one year's trial, the number of compensatable accident cases were reduced to the extent of 22 per cent.

General Committee: This committee consists of the plant agent, assistant agent, superintendents, master mechanic. The duties of this committee are to consider and pass on all suggestions and recommendations forwarded by the overseers' and employes' committees, especially where the feature recommended would cost considerable money. Any intelligent and practical suggestion is never refused. When this policy is carried out, employees will realize that the management is sincere and will therefore take greater interest in the organization. All accidents of long standing are reviewed by this committee; also all reports that the safety engineer has to make to the progress of the work.

Overseers' Committee: This is composed of the overseers from every department, and meetings are held once a month, the same as those of the general committee. Their duties are to pass on any minor recommendations forwarded by the employees, and to discuss accidents with the purpose of finding a means of prevention. In this way they have the opportunity of knowing what sort of suggestions and accidents are being reported from other departments, and can perhaps forestall similar ones in their own rooms.

Workers' Committee: Members for this committee are appointed from among the second hands or other employees generally, men or women, for a term of three months. Each department is represented, and for large sections there are larger representations. One-third of each committee is retired every month after completing three months' service. This committee makes recommendations relating to safety, and also transmits to the employees suggestions relative to the promulgation of safety work in all sections of the plant. The safety engineer and a member from the labor department are present at all meetings of all committees, the safety engineer acting as chairman of the employees' committee and secretary to all other committees.

Every committee member, from all three branches, receives a button to wear, indicating to the other workers in his or her room that he or she is a safety member, and as such can be approached on any matter pertaining to safety. Bulletins are printed illustrating dangerous practices in each department and their consequences; also the safe way of doing things. They are posted in each department in a

(Continued on Page 30)

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*Address by I. McNulty, Department of Labor, American Woolen Company, Lawrence, Mass., at 12th Annual Safety Congress.

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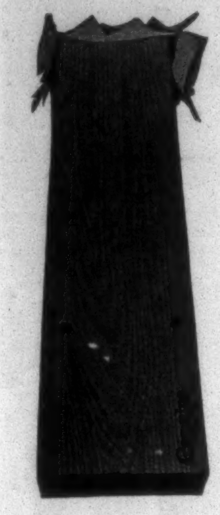

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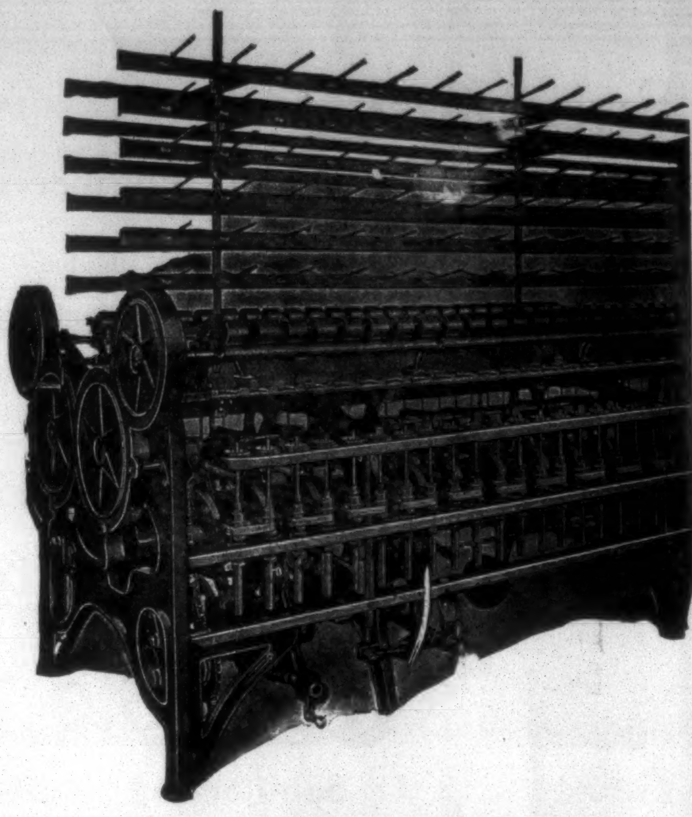

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Iron Stains in Cloth

Iron stains in cloth may be caused in a direct manner by the sizing agent, or indirectly during the processes of sizing, weaving or packing. When one considers the great coloring power of iron there need be no wonder at the mischief a very minute amount may cause. When such ingredients, as calcium, magnesium and zinc chlorides in conjunction with clay, crude glycerine, etc., are used in sizing mixtures, it is of importance to know the analyses of these ingredients.

Calcium chloride seldom contains more than 0.20 per cent of iron, and would not cause any trouble of itself unless the other ingredients of the sizing mixture contained similar traces of iron.

Some of the grades of zinc chloride are almost free from iron; others contain from 0.20 to 1 per cent of iron. The latter amount is too high, and should not be used for sizing purposes.

Magnesium chloride is one of the chief sources of iron stains in cloth, some of the grades containing more than 1 per cent of oxide or iron, and in many cases where the magnesium chloride is bought in the solid and contained in iron drums, a greater percentage of iron is often found, as during the dissolving of the solid magnesium by "live" steam the iron drum is affected and oxide of iron is contained in the dissolved magnesium chloride. The best plan in the case of solid magnesium is to remove the iron drum before dissolving, due care being taken to wipe away any particles of iron rust left on the outside of the block of magnesium. In some brands the solid magnesium is free from iron, but if dissolved in contact with the drum, iron is found in the dissolved solution.

China clay is often a source of iron stains. Of ten samples analyzed, the lowest percentage was 0.38 per cent and the highest 2.06 per cent. The average percentage of the 10 samples was 1.13 per cent of ferric oxide. There is a simple and quick process of separating the iron from the clay, and this should be resorted to where consignments are required absolutely free from iron.

Water is another source of iron, but iron stains in the cloth should not occur from this source, as the water should be analyzed, and if iron is present such a source should be rejected. Water containing the most iron is often found in supplies from the moorland and clayey districts.

Iron stains present in cloth may indirectly be due to many causes, the chief of which is the cloth being sized with an excess of moisture yielding substances, as calcium chloride, magnesium chloride, and commercial glycerine. In most cases the damage is done where the looms are idle during the night or weekends. This is especially the case where the cloth is stained with parallel marks across the width of the cloth. These are often caused by the rusting of the reeds, temple rollers and the "rests." In some cases, water and condensed steam from the roof of the shed drop on various parts of the loom and cause iron stains.

Where iron stains are present in cloth owing to the ingredients used in sizing, these stains often vary in size and color, and in many cases are not visible during manufacture, but present themselves when the cloth is unpacked.

Glycerine of the crude commercial brand is used extensively in sizing mixtures, but its constitution should be known, as much trouble may result from its use. Many samples contain a varied amount of mineral matter, in 10 to 15 per cent of which magnesium chloride, sodium chloride, and calcium chloride are well represented; glucose and nitrogenous matters are also present. The specific gravity of crude glycerine is somewhat higher than the pure, but is not quite so volatile when heatde.

The weaving is improved by the use of glycerine, but many disadvantages occur when used indiscriminately. It is very hygroscopic, and should not be used without a little antiseptic substance.

Inferior grades of paraffin wax should not be used in pure or medium sized cloths, as stains of a varied nature are the result of its use, and when much is used the cloth when stored assumes a yellowish hue. If wax must be used, a good brand of spermaceti is the best.

Iron stains are often caused by the packing materials, as the paper often contains oxide of iron, and if the cloth is heavily sized there is a chance of iron stains. In some cases cases the bales get wet and the moisture acts upon the iron bands, which ultimately stain the cloth.

Oxidation takes place in any material that contains any kind of impurity when air, moisture and warmth are present, and the oxidation varies according to the amount of oxidizable matter present. The deficiency of tallow is not the cause of iron stains or spots; in many cases too much tallow is used, which aids in making the sizing mixture very acid. The stronger the acidity of the sizing mixture, the greater the action in producing iron stains, as its action upon the metallic pipes, fittings of the sizing becks and taping machines is obvious by the stained nature of such fittings.

In order to obtain the best results from any sizing mixture it should be neutral or only slightly acid to litmus; as a strongly acid size soon disintegrates and causes much trouble during the weaving, because it ultimately leaves the warp threads, and much dust is produced. When a sizing mixture is too acid, the same should be reduced by the addition of sodium carbonate or caustic soda. The "shieving" of the warp threads is often due to the use of an acid size.

In pure sizing the writer has known many mixing of 220 pounds of starch being mixed with 25 to 40 pounds of tallow. Fully one-half of this tallow is wasted, as proved by the amount present in the sized warps. Where does it go? The presence of such a large percentage of fat only adds to the acidity of the sizing mixture, and it is possible to have a more perfect size by adding only 5 pounds of tallow to the weight of starch named.

The heavier the size mixing and the more acid; in the case of a 139 per cent mixing as much as 250 pounds of tallow is used in conjunction with 450 pounds of flour It is not possible to combine this weight of tallow with the other sizing ingredients, with the result that the fermented flour, which is strongly acid, is mixed with the fatty acids, and a sizing mixture of a strong acid character is produced. The constitution and the proportional blending of the various sizing ingredients are of first importance, and where this obtains, much inconvenience, trouble and expense are avoided.

The following is a quick and simple test for iron: Acidulate the solution it is desired to test with dilute hydrochloric acid, add a few drops of potassium ferrocyanide and a blue color will be produced if ferric salts are present. Ferrocyanide of potassium gives a blue color with ferrous salts.

In the finishing of the cloth there are many grounds for complaint, as the lack of knowledge of chemistry often fails to prevent the mixing of compounds in the same finish, capable of reacting with each other, and which give rise to new reacting compounds. The quality of the materials used in finishing should always be considered.

The employment of inferior bleaching compounds, acids or alkali only incrceases the cost of the process by making it necessary to use more and to the detriment of the finished cloth. As a large amount of substances are used in producing the various effects in textile finishing, it is well to check the regularity of supplies by analysis from time to time.—The Textile Manufacturer.

Mills Request Investigation.

Raleigh, N. C.—Cotton mills of Guilford and Alamance county, opposing the Southern Power Company's petition for rate increases, filed their brief with the corporation commission, repeating their "earnest request" for an investigation of "not only the properties, income, investment, expenses and income of the petitioner but of all allied companies."

After citing that the Southern Power pays a greater amount per kilowatt hour for power from two companies not allied with it than it does from allied companies, the protesting mills ask the commission to "ascertain why it is the petitioner pays allied companies much more for current than it pays independent companies for the same current which it mingles with, transmits and sells to customers like the protestants."

The four-paged brief deals almost altogether with the differences in cost of current, which it alleges the record shows, and with a reputation of the request for an investigation by the commission of the Southern Power's properties, income and investment.

The differences in the cost of current are set forth by the protesting mills by the allegation that the Southern Power bought 2,000,000 kilowat hours of current last year from one independent company for four mills that it bought 50,000,000 kilowatt hours from the Yadkin Power Company for five mills, and that it pays to its alleged companies seven mills the kilowatt hour.

The protesting mills, for which the brief was filed by E. S. Parker, Jr., of Greensboro, their attorney, are Banks Holt Manufacturing Company, Eno Cotton Mills, Bellvue Manufacturing Company, Revolution Cotton Mills, Travara Manufacturing Company, Elmira Cotton Mills Company, E. M. Holt Plaid Mills, L. S. Holt & Sons and the Consolidated Textile Corporation.

The corporation commission sometime ago indicated that the request of the protesting mills for an investigation was an impossibility as neither the machinery nor method exists for conducting the character of inquiry asked.

When a decision will be reached by the commission is uncertain. The members have emphasized their determination to go into all angles of the petition and the protests with all the thoroughness possible. It likely will be some months before a decision can be reached. The power company is seeking a nominal increase of from $1.25 to $1.40 per thousand kilowatt hour, the increase rate asked for in the petition acted upon—by the commission in 1921.

Heavy Cotton Exports From United States.

New York, Dec. 17.—Exports of cotton from the United States today aggregated 184,134 bales, the heaviest since November 1, when 189,425 bales were shipped.

The record for a single day is 200,000 bales.

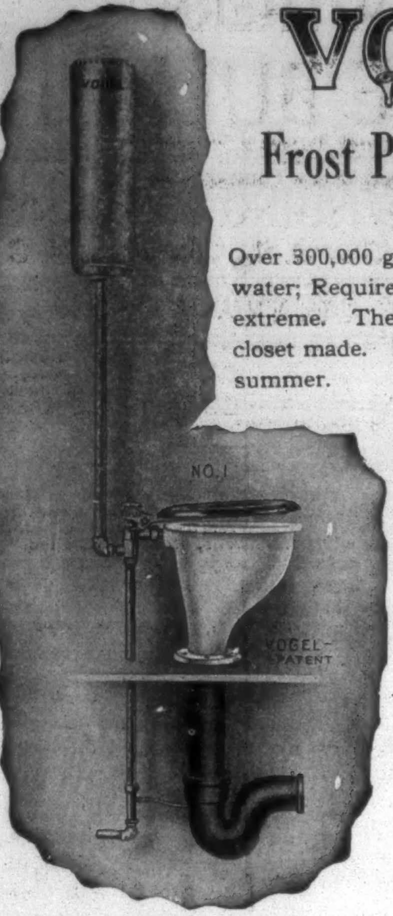
More than half of today's exports were destined for Great Britain. So far this season exports have amounted to 3,018,025 bales, or 353,000 in excess of the same period last year.

Textile Hall Sold to New Company By Old Company.

Greenville, S. C.—For a consideration of about $115,000 the old and now defunct Textile Hall Corporation, which was organized several years ago, and which was a "profit-making company," has sold the property on West Washington street, on which stands the Textile Hall, to the new Textile Hall Corporation, which was formed on September 5, 1923, on a "non-profit making" basis, according to a real estate deed filed in the office of James R. Bates, register mesne conveyance.

The new company is without capital stock, being organized and chartered thus, according to the deed. There is a first mortgage on the property for $50,000 to the Peoples National Bank, while a secondary mortgage to the bank is for $60,000. The new corporation agrees to pay all outstanding bonds, the deed shows. Revenue stamps indicate $5,000, making the total consideration about $115,000.

The property measures 341 by 100 feet.



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SOUTHERN
TEXTILE BULLETIN
Member of Audit Bureau of Circulations

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JUNIUS M. SMITH	Business Manager

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Dangerous Tendencies.

There has come to our desk from the University of North Carolina an announcement relative to the Journal of Social Forces, now being published there, and prominent among the list of contributors to their journal are mentioned Homer Folks, Owen R. Lovejoy and Miss Grace Abbott.

The first two are parasites who have for years been professional agitators and the last named is well known as a tricky and underhand manipulator of statistics.

We heard Owen Lovejoy addressing a Boston audience say "'Down in North Carolina children of six and seven years of age are employed in the cotton mills for twelve hours a day" and yet the University of North Carolina prints his name as second among the list of distinguished contributors to the Journal of Social Forces.

The cotton manufacturers of North Carolina were greatly incensed by the article of Frank Tannenbaum, an ex-convict and confessed Red, in the Century Magazine entitled "The South Buries Its Anglo-Saxons," and yet that article was conceived if not actually written at Chapel Hill.

We take pride in the growth and development of our University but wonder if in publishing the Journal of Social Forces and in similar activities it is not going aside from its purposes and its intended work.

It was never intended as a breeding place for socialism and communism but when professors and instructors turn aside from their duties as teachers of regular courses and seek to develop fads and fancies, great injury to our State may develop.

When the University of North Carolina boasts of Homer Folks, Owen Lovejoy and Miss Grace Abbott as leading contributors to a Journal of Social Forces it is time to wonder what effect the outside activities at the University is going to have upon the minds of the future citizens of North Carolina.

Migration Period for Finishing Plants.

This seems to be the migration period for finishing plants and having looked forward to the day when Southern cotton goods would be finished in the South, we are happier over the movement of the finishing plants than we were over the location of new mills.

While the big Pacific Bleachery and the smaller Southern Bleachery are under construction between Spartanburg and Greenville and the Lowell Bleachery South is being completed at Griffin, Ga., announcement has come of the establishment of a large bleachery at Old Fort, N. C., by Joseph Bancroft & Sons, of Wilmington, Del., and a similar establishment at Asheville, N. C., by the Sayles Finishing Plant, Inc., of Pawtucket, R. I.

A very large volume of cotton goods are used in the West and Middle West and there has been no good reason why Southern cotton goods should be shipped to New England to be finished and then reshipped to the West.

The rapid movement of the finishing plants to the South is significant. Their operation depends upon a supply of cotton goods and they see distinctly a diminishing supply from New England.

An economic situation confronts the mills of Fall River, and while they may by dissipating their surplus hold on for a few years, they must inevitably face the problem of "dismantle to move" or "dismantle to junk."

Our Purchasing Power.

Value of the country's principal farm crops this year has been placed at $8,322,695,000 by the Department of Agriculture in its final estimates of the year. Revised figures of last year's crops placed their value at $7,449,804,000 and the 1921 crops at $5,629,548,000.

The farmers of the United States therefore have $873,000,000 more than in 1922 and $2,693,000,000 more than in 1921.

And yet the buyers of cotton goods say that the farmers will go around ragged rather than pay a few cents more for a shirt and that Mrs. Farmer, with $2,693,000,000 more than in 1921, will continue to wear her 1921 dress and hat.

Retail trade is far in excess of recent years, and although the buyers may fight hard against prices, they must sooner or later buy goods in order to meet the requirement of the increased purchasing power.

Increasing Exports.

In August we said editorially "Any decrease in cotton consumption by American mills will be equalled by the increase in foreign consumption," and we have reiterated that statement many times.

This week the exports of cotton passed the 3,000,000 bale mark and is now within 1,850,000 bales of the total exported last season.

Assuming that the exports will only reach 3,200,000 bales by January 1st and that the consumption of American mills will be 500,000 bales for December, we will on January 1st have consumed and exported 5,780,000, which will leave in the United States 6,000,000 from which to supply American consumption and exports to September 1, 1924, a period of eight months.

Abandonment of Cotton Acreage.

Washington, Dec. 17.—Cotton acreage abandoned after June 25 this year amounted to 4.6 per cent as compared with 2.9 per cent last year and 3.7 per cent in 1921, the Department of Agriculture announced today. The area picked was announced as 37,420,000 acres.

The percentage of abandoned acreage by States was announced as follows:

Virginia, 0.5 per cent; North Carolina, 0.5; South Carolina, 2.0; Georgia, 11.0; Florida, 15.0; Alabama, 3.5; Mississippi, 8.1; Louisiana, 4.0; Texas, 2.0; Arkansas, 5.0; Tennessee, 4.5; Missouri, 10.0; Oklahoma, 8.0; California, 1.0; Arizona, 3.0; and New Mexico, 14.0.

Textile Foundation Approved.

Charlotte, N. C.,
Dec. 13, 1923.

Mr. David Clark,
Charlotte, N. C.

My Dear Mr. Clark:

By direction of our Board of Governors, I beg to advise that the request of the committee from the Southern Textile Association which you presented at the meeting of the board in Greenville, on Tuesday, December 11, was unanimously endorsed, and the secretary was instructed to write to the individual members of our association, at the proper time, a letter commending to their consideration, the plans for a Textile Foundation.

It gives me great pleasure to advise you to this effect, and whenever the proper time arrives, I shall be very glad to take this matter up further with you.

Action was taken by Captain Smyth, seconded by several members, and I beg to congratulate you on your very fine presentation of this matter.

Sincerely yours,
W. D. Adams,
Secretary and Treasurer.

National Ring Traveler Co.

Providence, R. I.,
Dec. 3, 1923.

Mr. David Clark, Editor,
Southern Textile Bulletin,
Charlotte, N. C.

My Dear Mr. Clark:

The purpose of this letter is to congratulate you upon your "Health and Happiness" Number for the current year. It is very complete, and shows a tremendous amount of work on your part, and I have no doubt that your effort will be appreciated by your subscribers and advertisers in general as well as the entire Southern textile interests.

I remain,
Yours very truly,
P. C. Wentworth.

Caraleigh Mills Co.

Raleigh, N. C.,
Dec. 14, 1923.

Southern Textile Bulletin,
Charlotte, N. C.

Gentlemen:

Allow me to congratulate you. Your Health and Happiness Supplement is wonderfully gotten up and intensely interesting, and will go a long way toward curing a lot of warped minds who wouldn't know a cotton mill if they saw it, but are able to write lengthy articles "telling the world" how we are not running ours.

Sincerely yours,
L. R. Gilbert.

Wallace to Help Change Cotton Report System?

Washington, D. C. — Secretary Wallace promised to co-operate with members of the cotton bloc in Congress in studying possible changes in the system of cotton crop reporting. He told Representative Rankin, the Department of Agriculture would send experts to confer with the committee in considering the problem. A meeting will be held next week.

Personal News

W. N. Pharr is now superintendent of the Hartsell Mills Company, Concord, N. C.

J. M. Creekmore has accepted position as superintendent of the Crawford (Ga.) Cotton Mills.

W. C. Campbell has succeeded R. S. Blalock as superintendent of the Douglas Hosiery Mills.

L. E. Sutton has succeeded Newton Wilson as superintendent of the Anniston Cordage Company.

J. T. Gardner has been promoted from treasurer to president of the Anniston (Ala.) Yarn Mills.

E. W. Bullard has accepted the position of superintendent of the Anniston (Ala.) Yarn Mills.

M. A. Riley has succeeded T. R. Morton as superintendent of the Acworth (Ga.) Mills.

C. H. Goodroe is now superintendent of the Banning (Ga.) Cotton Mills.

J. E. Chappell has succeeded A. F. Hinsdale as superintendent of the Morrisville (N. C.) Hosiery Mills.

Hume Eastman has been promoted to office manager at Anchor Duck Mills, Rome, Ga.

C. E. Davis has been appointed superintendent Perkins Hosiery Mills, Columbus, Ga.

G. F. Orr, formerly of Eureka Mills, Chester, S. C., is night spinner in Mill No. 1, Great Falls, S. C.

J. H. Carpenter has resigned as superintendent of Perkins Hosiery Mills, Columbus, Ga.

Charles E. Lee has become superintendent of the Carter-Collier Company, Barnesville, Ga.

W. E. Steele has resigned as superintendent of the Whitehall Yarn Mill, Whitehall, Ga.

Z. R. Lytton has become superintendent of the new Ragan Spinning Mill, Gastonia, N. C.

Spencer Howell has been appointed superintendent of the Capel Rug Mill, Troy, N. C.

C. L. Martin is now superintendent of the Maline Mills, Winston-Salem, N. C.

E. E. Hagan has succeeded John Moser as superintendent of the Standard Hosiery Mills, Burlington, N. C.

B. J. Broddie has accepted the position of superintendent of the Georgia Duck and Cordage Mills at Scottdale, Ga.

M. V. Tally has accepted the position as superintendent of the Cotton Mill Products Company No. 4, at Yazoo City, Miss.

H. O. Ball, superintendent of the Pepperton Cotton Mills, Jackson, Ga., has also been elected treasurer of that company.

J. E. Smith, from Winnsboro, S. C., is fixing in card room of Springstein Mills, Chester, S. C.

J. F. Chappell has succeeded E. J. Brown as superintendent of the Chatham Knitting Mills, Durham, N. C.

J. P. Toms is now filling the position of superintendent of the Eastside Manufacturing Company, Shelby, N. C.

Ray Nanney has succeeded John W. Boozer as superintendent of the Horn Company at Spindale, N. C.

H. G. Cobb has succeeded C. E. Gore as superintendent of the Pioneer Cotton Mills, Guthrie, Okla.

W. P. Owens has accepted the position of superintendent of the Vardry Mills, Greenville, S. C.

John G. Chapman has been promoted from superintendent to manager of the Samoset Cotton Mills, Talladega, Ala.

U. S. Henderson has succeeded W. F. Smith as superintendent of Bibb Manufacturing Company plant at Reynolds, Ga.

G. L. Chapman has succeeded John Kellars as superintendent of the Calhoun Cotton Mills and the Woodstock Cotton Mills, Anniston, Ala.

Albert Lehman, office manager of the Anchor Duck Mills, Rome, Ga., has been appointed superintendent of the Dixie Mills, LaGrange, Ga.

T. B. Moore, formerly superintendent of the Clover Mills, Clover, S. C., has accepted a similar position at the Dixie Spinning Company, Chattanooga, Tenn.

W. E. Hammond, formerly superintendent of the Mills Mill, Greenville, S. C., will be superintendent of the new Balfour Mills, Balfour, N. C.

R. L. McGraw, who has been overhauling in spinning, is now night overseer of spinning, Mill No. 2, Republic Cotton Mills, Great Falls, S. C.

M. C. Kirkpatrick, from Eureka Mills, Chester, S. C., has accepted a position in machine shop, Mill No. 1, Republic Cotton Mills, Great Falls, S. C.

H. W. Pittman has been promoted from assistant factory manager to general superintendent of the Bibb Manufacturing Company, Macon, Ga.

S. J. Webb has resigned as superintendent of the Waco (Tex.) Twine Mills to accept a similar position with the Houston Cotton and Twine Mills.

Geo. W. Murphy, superintendent Dixie Mills, LaGrange, Ga., has been appointed general manager of the three Couch Mills and will assume the management of these mills January 1.

(Continued on Page 30)

Cotton
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Your Selling Agent,
the Retailer and the Public
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MILL NEWS ITEMS OF INTEREST

Rockford, Tenn. — The Rockford Mills are building an addition to their plant here.

Benton, Ky.—The Paducah Hosiery Mills, Inc., will erect a branch plant here.

Burlington, N. C.—The Burlington Mills, Inc., which were recently organized here by J. L. Love and J. Spencer Love, of Gastonia, will soon let contract for a building to contain about 60,000 square feet of floor space. Building plans call for 70 homes for employees and two warehouses. M. B. Smith, of Burlington, is president, and J. Spencer Love, treasurer and active manager. Mr. Love has opened offices here. It is expected that a part of the equipment of the Gastonia Cotton Manufacturing Company will be moved to the building here.

Spartanburg, S. C. — The Blue Ridge Hosiery Mill and the R. L. Lee & Co. damask mill, both of Landrum, in Spartanburg county, have been merged and will hereafter be known as the Blue Ridge Mills, according to an announcement here. The present capital stock will be increased to a figure between $150,000 and $200,000. Following this action by the owners of the two mills, the following officers were elected: President, J. S. Carpenter; vice-president, Roy P. Whitlock; secretary and general manager, Roland L. Lee. It is possible that a new yarn mill will be built in the near future.

Greenville, S. C.—Machinery is now being installed and plans call for the operation of the plant of the Southern Worsted Corporation at Sevier during the latter part of January, it was stated here.

While it is not expected that all of the machinery will be installed by the first of the coming month, efforts will be made to rush the plant to capacity at the earliest possible time. When in full operation the plant will give employment to approximately 500 persons. Work on the plant and village was not started until in June, the entire construction activities having required less than six months.

The installation of the machinery and the completion of minor details is all that is necessary before the plant will be ready for operation. A small portion of the machinery already has been received.

Balfour, N. C.—With most of the machinery purchased, and plans completed for the new cotton mill to be erected here, which is to be headed by Capt. Ellison A. Smyth, bids on the actual building work will be requested of contractors within the next fortnight. Actual work on the new mill will begin probably about January 1, according to announcement made through J. E. Sirrine & Co., engineers for the plant.

The spinning machinery, looms and roving machinery has already been bought and now virtually all that remains before work can begin is the awarding of the building contract, it was said.

The new plant will be only one story in height and measure 212 by 374 feet, and modern in every detail. About 125 employees will be given work in the plant and 75 mill dwelling houses will be erected, together with a cotton warehouse 100 by 100 feet.

Columbus, Ga.—At the annual meeting of stockholders of the Columbus Manufacturing Company, held at the offices of the company, the reports of the officers showed satisfactory results of the year's business, and the usual dividend, payable January 1, 1924, was declared.

The following board of directors for the ensuing year was elected:

William H. Wellington, Walter H. Holbrook, Harry L. Bailey, Jesse S. Wiley, all of Boston; W. C. Bradley, R. E. Dismukes, D. A. Turner, E. P. Owsley, F. B. Gordon, all of Columbus, Ga.; S. P. Gilbert, Atlanta, Ga., and A. Minis, Savannah, Ga.

At a meeting of the board of directors following the stockholders' meeting, the following officers were elected for the ensuing year:

W. C. Bailey, chairman; F. B. Gordon, president; Jesse S. Wiley, treasurer; W. H. Dismukes, secretary, and Frank Rhodes, assistant treasurer.

All of the directors attended the meeting except Mr. Wellington, of Boston, and Mr. Minis, of Savannah.

Sayles to Build Bleachery Near Asheville.

Asheville, N. C.—With official announcement by officials of the Sayles Finishing Plant, Inc., of Rhode Island, that plans for starting work upon the contemplated bleachery, to be located on the Swannanoa River, four miles east of Asheville, have been completed, persons in this city associated with the enterprise said actual construction should start on the industry not later than January.

Announcement was made a few days ago that definite decision had been reached by the Sayles Company to locate their plant on 200 acres of land acquired on the Swannanoa.

A survey is now being made of the area on which the buildings are to be erected and a modern housing community is to be built. Within the next few weeks, the model village will be in process of construction on a part of the lands known as the Cheesborough Estate. Over 400 employees and their families are to be housed in this new community, according to announcement.

The bleaching and finishing plant is to cost $2,000,000.

Work will also be started at once on the bleachery and finishing plant, the buildings of which will be located in the flat lands in the bend of the river near the former home of Governor Locke Craig.

Plans and specifications for the entire plant have been drawn by J. E. Sirrine, mill architect and engineer, of Greenville, S. C.

Work will be started this month on the spur track of the Southern Railway to be run through the mill property.

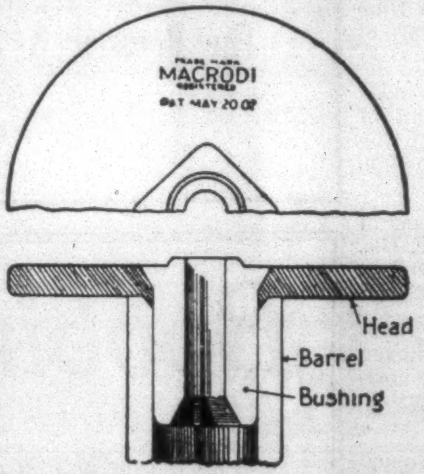
Abbeville Cotton Mill Engages a Public Nurse.

Abbeville, S. C.—Miss Emily Passmore, of Westwood, N. J., has been secured by the board of operatives for the Abbeville Cotton Mills as a public health nurse at the community house. Miss Passmore is in Abbeville and will begin her work at once. She is a young woman of ability and experience, having graduated at the Parks Hospital in Washington, which institution is under the auspices of the National Red Cross. Miss Passmore served in France during the world war and has since served 18 months in Turkey, Russia and Greece with the near east relief. Right recently she has been doing research and demonstration work with the Rockefeller Institute in New York.

Mill Stocks Lower.

The average price of 25 cotton mill stocks as released by R. S. Dickson & Co., showed a continued recession of 24 points for this week, the average being 139.24 for this week against 139.48 for last week.

The South Carolina stocks showed substantial losses this week, Clifton dropping $2 per share, Dunean and Mollohon $3 per share, while Cowpens, Gaffney, Musgroce, Marlboro, Poinsett and Union Buffalo each showed a loss of $1 per share. Chiquola, Monarch and Pacolet showed a rise of a few points. The North Carolina stocks showed a slight ris-



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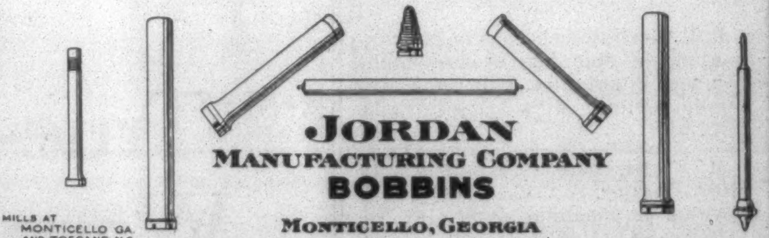

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ing tendency. Cabarrus preferred, Eagle, Efird, Erwin, Ranlo and Rhyne-Houser each gained $1 per share in bid prices, while Eastern lost $4 and Parkdale $1 per share. Trading remained quiet in all stocks.

A few lots of Durham Hosiery preferred changed hands at $60 per share, while Winget and Smyre preferred were sold in small lots.

Pacific Mills Will Curtail.

Boston.—The cotton department of the Pacific Mills is to be shut down December 22, for two weeks, reopening January 7, according to announcement made recently. The customary shut-down at the print works during the stock taking period also is announced. Somewhere between 3,500 and 4,000 operatives are affected.

Textile Employment Increases.

Washington.—During the month just ended increased employment of 1.1 per cent was reflected in textiles and their products' industries when compared with October, according to statistics made public by thee Department of Labor, showing the industrial employment situation.

Of the 14 major industrial groups, seven showed an increase in employment, and seven decreases—the most noticeable increase being that of tobacco manufacture, 3.1 per cent, while the heaviest decrease is disclosed in the iron and steel industry amounting to 2.85 per cent.

In the Southern districts, North Carolina, South Carolina and Georgia report the industrial situation excellent.

Tennessee reports textile mills operating on full time, while ein Alabama there is an apparent increase in textiles, chemicals and miscellaneous industries.

Sirrine Reports $12,000,000 in Mill Construction.

Greenville, S. C.—Textile plants costing more than $12,000,000 are now in process of construction or will be started in the near future, according to information obtained with the announcement from J. E. Sirrine & Co. that plans were being drawn for a $2,000,000 bleachery to be located near Asheville.

The bleachery and finishing plant on the Swannanoa river, near Asheville, will be built by the Sayles Finishing Plants, Inc., of Rhode Island. This project is entirely separate and distinct from that of the Brancroft interests which, it was announced recently, might construsct a bleachery at Asheville.

Land for the Sayles plant has been purchased and work will begin at the earliest possible date, possibly within two or three months. The plant will give employment to about 400 persons. Plans and specifications for the bleachery are now being drawn in the office of the local mill engineering company.

A survey was made of conditions about Asheville with a view of determining the advisability of locating a bleachery there. The purchase of the land by a representative of the Parker interests, followed the favorable report on the survey.

While the Sayles plant will not actually be started during the year it is an assured fact and work will be gotten under way as soon as the details can be arranged. The local company intends speeding this up as much as possible.

Other large textile developments in the Piedmont section include the plant of the Southern Bleachery, at Taylors; the Southern Worsted Corporation, at Sevier; the Pacific Mills, at Lyman, near Greenville, and the W. A. Erwin Mills, at Duke, N. C. The Balfour Mills, at Balfour, N. C., are also assured and work will begin early in the new year.

The largest single development in the textile industry in the Piedmont section is at Lyman, Spartanburg county, where Lockwood-Greene & Co. are building a mill, bleachery and village which when completed will represent an outlay of approximately $5,000,000.

The Erwin Mills, at Duke, plans for which were drawn here, will represent an expenditure of about $3,000,000.

The Balfour Mills, at Balfour, near Hendersonville, will cost about $750,000. Plans for this mill, which will be headed by Capt. E. A. Smythe, of this city, were drawn in Greenville.

The Southern Worsted Corporation plant, near Greenville on the former site of Camp Sevier, will represent an expenditure of more than $1,000,000 and will be ready for operation in January.

The Southern Bleachery, to be located at Taylors, nine miles from Greenville, will be ready for operation by February 1, it was announced. This plant, one of the few bleacheries in the South and the second in Greenville county, will represent an expenditure of about $1,250,000.

Other large textile developments underway, plans for which were drawn in Greenville, include the construction of a dye house at Graniteville for the Gregg Dying and Finishing Company, and the building of large warehouses for the Florence Mills at Forest City, N. C The Graniteville project will cost about $125,000.

In addition to the above many smaller jobs are under way, including additions to plants already in operation, showing the year 1923 has been an epoch in the textile industry of the Piedmont section of the Carolinas.

The most outstanding development of the year, mill officials pointed out, is the trend of textile plants towards the mountains. Balfour and Asheville both being in the heart of the Appalachian mountains.

Callaway Mills, Inc., Establishes Representation in Akron.

Ely R. Callaway, vice-president and treasurer of the Callaway Mills. Inc., announces that having operated with much success since their establishment a year and a half ago. with their main office in New York and with representatives in Boston and Chicago, they find it advisable, in order to take care of the large volume of buwsiness in the vicinity of Akron, to secure the services of Lawrence A. Watts to represent them in the Akron district, with his office in the Second National Building, in that city.

More Fall River Mills to Close Indefinitely.

Fall River, Mass.—The Chace Mills, employing over 800 operatives, closed on Saturday for an indefinite period.

Notices were posted by the American Printing Company that the cotton manufacturing division of the plant will close on December 22 until further notice.

The latter company operates seven cotton mills and employs between 3,000 and 3,500 operatives.

One of the Flint mills has been closed for a long period.

The Stafford, which employs 850 operatives, has been closed for several weeks.

WELL DRILLING AND DEEP WELL PUMPS

We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.

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Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS

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TEXTOL, a new product especially for Print Cloths. A complete warp size, requires no addition of tallow

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Tallow, Soluble Grease, Soluble Oils, Gums, Glues, Gum Arabol, Lancashire Acme Size, Waxes, Finishing Pastes, Soaps, Glycerine, Ready-made Heavy Size, Sago and Tapioca Flours, Dextrines, China Clay, Soluble Blue, Bone Grease, Bleachers' Blue.

SPECIAL COMPOUNDS FOR WARPS, WHERE STOP MOTIONS ARE USED.

WEIGHTING COMPOUNDS FOR COLORED AND WHITE WARPS.

FINISHING COMPOUNDS FOR ALL CLASSES OF FABRICS.

The Arabol best grades of cotton warp sizing compounds make the "finest weaving and will hold the fly."

These compounds are based on the best practical experience and the best materials used in their manufacture.

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NEW MILL EQUIPMENT

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Charlotte Supply Co.
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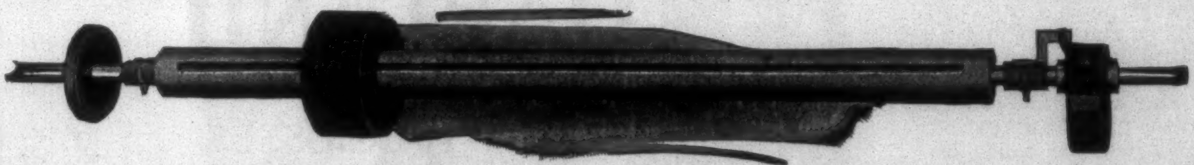

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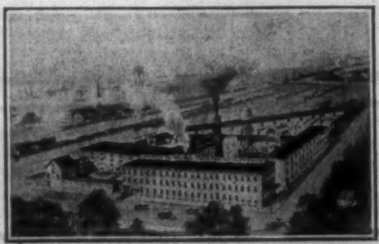

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Bobbins, Spools and Shuttles

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Catalog on Request

Manufacture of Haircloth.

Haircloth manufacture is not very well understood by the average mill man, for the reason that it is a special fabric and its composition is of a character that does not involve the employment of much of the machinery operated either in a cotton or a woolen mill.

For instance, hair for haircloth is not carded, combed, drawn or spun, like other fibers used in the fabrication of textiles.

Nor can the strands of hair be tied into continuous lengths with knots in order to make warp or filling. The process of construction of haircloth is conducted on different lines from that employed in the production of either woven or knit textures. Nor is the process similar to the making of felt goods. Haircloth is woven on specially designed looms, provided with the necessary mechanical equipment for handling separate filaments of hair averaging 25 to 30 inches in length.

Haircloth is usually made with a cotton warp and a horse hair filling, as most other kinds of hair is too short for practical weaving.

Sometimes linen is used instead of cotton for the warp, but only in the higher grades of haircloth. It is seldom that haircloth is made with a hair warp owing to the expense which would be entailed in weaving with short lengths of hair. If hair is used for warp as well as for filling, the old-fashioned hand looms are commonly employed and the weaving is slowly done by hand.

Character of Horse Hair.

Horse hair, like all other hairs, as compared with wool is a stiff, horny strand, having closely placed scales on its surface. The strands from the tail of the horse are preferred as they reach 30 or more inches in length while those of more inches in length while those of the mane are shorter. The internal arrangement of the cells of the fiber differs from that of wool in that there is a distinct medullary center. The shaft is always straight, strong and smooth. But of course the fine feel, curly character and affinity for dye which properties are so valuable in wool, worsted, cotton, silk and most other textile fibers, are absent in the shaft of hair whether it be from the horse, the cow, the dog, the cat or the rabbit. Cow hair is used extensively in upholstery yarns of the lower grades as well as in certain carpet yarns. Cow hair is of course much shorter than horse hair, particularly the kind pulled from the hide in the tanneries.

As much of the cow hair is of the pulled sort the root of the hair often shows under the microscope. Cow hair has a central medullary substance that shows on the surface throughout the length of the fiber as in the diagram. The bulk of the hairy growth sheared or pulled from the dog, rabbit, cat or squirrel goes in the manufacture of hats, although some of it finds its way into the cheaper grades of yarns for carpets.

Weaving Hair Cloth.

When haircloth is woven on a plain loom, using a cotton warp with stretches of horse hair for the filling, a specially constructed device is used to carry the hair filling into the shed with each change of the harnesses. The horse hairs for the filling are placed in a bunch at one side of the loom, convenient to the shed. A long arm with a nipper at the end passes through the shed formed by the warp and grasps one hair which it draws through the shed. The harnesses then change and the operation is repeated, usually making a plain weave. Sometimes the weave is of the rib type in which the draft for the chain is shown at the left, the plan of the weave at the right and the sectional arrangement of the warp threads below. If it desired to thoroughly cover the cotton warp threads with the hair filling, a weave is employed to float the latter on the face more completely. Some of the broken twills are used for this purpose. Also repp, hairline, basket and satin weaves.

If the order calls for fancy haircloth, a special design of loom fitted with a dobby is used. At each end of the loom is a trough in which a bunch of the hair is placed, and from which a selector picks a single hair and feeds it to a dummy shuttle which carries the strand of hair through the shed to the opposite side of the loom. This arrangement allows the use of two or more colors and the weave throws the hair on the face of the cloth, burying the cotton warp from view.

This class of haircloth is generally used for upholstery purposes. There is an imitation haircloth woven from manufactured yarn which resembles haircloth to a considerable extent. This kind of yarn is composed mostly of the remanufactured fibers, such as shoddy, mungo, flocks and noils. A percentage of hair material is added, both for the warp and the filling, and a fairly efficient haircloth results, although it lacks the essential properties of the genuine article.

Real haircloth is very strong, stiff, smooth, glossy and suitable for stiffening purposes in suits and for many uses in the upholstery industry. The imitation fabric is not so firm, although sizing materials are used to stiffen it. Nor does it possess the wearing qualities of the fabric woven from horse hair. But it is cheaper and can be woven on any type of loom, as the warp and the filling can be spun like any thread and therefore woven like all cloths.

Sometimes it is supposed that mohair and camel hair are used in hair cloth, but these fine, lustrous fibers are too valuable for use in high grade fabrics to use in haircloth. The hair of the common goat is sometimes used for yarns for weaving hair cloth, for this material possesses many of the characteristics of hair.

Most goat hair is fine enough to warrant carding and spinning it with wool or other fiber. Some of the vegetable fibers, such as hemp, ramie, flax, jute and china grass are also used in combination with hair in the manufacture of hair cloth. The group of animals known as the alpaca, the llama, the vicugna, and the guanaco supply a limited quantity of hairy wool for the haircloth trade. But the bulk of the material used in haircloth consists of cotton for the warp and horse hair for the filling.

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Last Longer, Make Stronger Yarn, Run Clear, Preserve the SPINNING RING. The greatest improvement entering the Spinning room since the advent of the HIGH SPEED SPINDLE.
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MILLS: Have your cotton received by experts and thereby increase the value of your production. We have had successful mill men tell us that for this reason they would have their cotton received by competent and experienced classers if they were making only "eights two-ply." Let us keep all undesirable cotton out of your mills. You will find it to be profitable.
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Christmas 1923

With the approach of Christmas and its spirit of peace and good fellowship it is with the utmost pleasure and sincerity that we join the many friends of the

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in wishes for success, prosperity and hearty good will.

This year has been exceptional in its opportunities for "honest to goodness" service to humanity.

The realization of this fact not only brings the highest reward, but is also a definite incentive to greater effort and larger success.

To one and all we wish this realization and in the year so soon to come, we hope that your prosperity will eclipse all previous experiences.

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Neps in Dyed Goods.

Recent work on neps in cotton fabrics and their resistance to dyeing furnishes an interesting example of a piece of research extending from faults in cotton growing right through manufacturing to their final appearance in the dyed or printed goods.

While these are possibly not the final words on the subject, the results from the British Cotton Industry Research Association as reported in a recent Journal of the Textile Institute, are significant of what may ultimately be expected in the way of practical results following scientific investigation.

It is a familiar fact that trouble has been experienced from time to time in cotton piece dyeing from groups of fibres (neps) that do not assume the full color of the finished dyed piece. A little has previously been written on the subject but now our knowledge has been extended by the examination of further faults that occurred in commercial work. The trouble has been found most prevalent in goods dyed with alizarine, para red and indigo, and consists in the apeparance of lighter motes showing on the dyed background and an accompanying streaky effect.

Briefly summarized, an examination of the so-called motes showed several types of defects:

Neps, or loose ends of yarn which are dyed or printed and then become detached or moved aside, leaving a white or light area.

White specks, each at a single point in a strand of yarn otherwise normally dyed.

Neps causing lighter spots, found to be the most common fault.

The last consisted of a matted tangle of hairs or fibres, a few of which were normally dyed. Each nep consisted of lightly dyed or undyed thin-walled fibres. On attempting to separate them from the group some fibres crumbled to fine particles. The apparent lack of color is to a certain extent an optical effect. In some shades the neps become glazed and show lighter on calendering, but in para red the defects were prominent before that operation, so it is not entirely an effect of reflection of light. Coming to the streaks, we find dyed effects running for a fraction of an inch in a single strand of yarn and careful examination has shown these to be merely elongated neps held in the body of the yarn, but otherwise similar to surface neps.

Examination of the gray cloth before dyeing showed the presence of the same neppy structures, which could be recognized by their "semi-glassy" appearance. Particles of seed coat were frequent and often formed the nuclei of neps.

In experiments on indigo-dyed mercerized goods, the general effect was to render the defect much less evident. This fact, which is also recognized in the trade, depends on the change of shape of the cotton fibre. The flattened ribbon characteristic of a thin-walled hair possessing an appreciable amount of secondary thickening is converted in mercerizing into a more circular form, and reflects light more like a normal fibre, and at the same time acquires a greater affinity for dye. Part of the fibre debris in the nep contains no cellulose (of the ordinary sort at least) and is not affected by mercerizing, so the faults persist to some extent.

November Exports Very Large.

Exports from the United States during November were valued at $404,000,000 compared with imports for the same period of $292,000,000, leaving a balance of international trade favorable to this country of $112,000,000.

The value of exports during November announced by the Commerce Department was greater than that for any other month since February, 1921. The imports in value were a trifle less than those of October and practically equal to those of November, 1922, when imported commodities amounted to $291,000,000. Figures are preliminary but are not expected to be changed materially when the detailed returns are received.

Officials said one of the reasons for the heavy export total could be found in recent high prices for cotton which commodity is a very large factor in fall shipments from the United States.

New England Mills Are Well Covered on Cotton.

New Bedford, Mass.—Mills using extra staple cottons are covered as to their needs for the balance of the current season to a much greater extent than is generally believed in the cotton trade. A considerable quantity of short cotton is also on order, much of it being on basis with the price still unfixed. Unless the shippers fail to deliver, there are very few New England mills that are faced with any likelihood of an enforced shutdown for lack of raw material, though there is still a fair quantity to buy if production continues on the present scale or increases. A number of the Fall River print cloth mills are turning to extra staple cotton of medium length.

There is still a very general interest in extra staple cotton in almost all of the large textile centers of New England. Two deals of 1,000 bales or more were talked of in the local market this week, one of them being for cotton of about inch and three-sixteenths staple.

Question Value of Combing Medium Cotton Yarn Counts.

New Bedford.—"In view of the current high cost of raw cotton, and the keen price competition in both yarn and goods markets, many manufacturers are coming more and more to question the value of the combing process for the medium counts," comment Frederick B. Macy & Co., of this city, in their weekly yarn letter. "The cost of the combing itself and of the waste that is taken out is relatively high," they say, "because of the value of the cotton taken out as waste. Carefully carded yarns, with a little extra twist added, will give results, it is claimed, that are nearly as good as can be had with the use of combed yarns, and the money saving effected can be used very nicely in meeting competition on the finished product.

"With the end of the year only a few weeks ahead, cotton yarn markets have reflected the general desire to go into the new year with inventories as low as possible. There have been strenuous efforts on the part of some interests to dispose of their accumulated stocks, but a general reluctance of buyers to engage sizable quantities. Prices, as a whole, have been rather firm, but any inquiry for a sizable nature brought a rush of offers and the keen competition resulted in some very sharp price cutting. Resale yarns have been available in certain quarters, but have not figured materially in the week's dealings, which have been confined for the most part to the buying of weaving yarns. Some interest has been shown in knitting yarns, especially when values took a temporary dip early in the week. Recovery came so quickly, however, that few actually place orders and they are very reluctant to do so at present levels. Thread yarns and tire yarns have been quiet, and no great activity was reported in insulating yarns either.

"The week's business was about equally divided between carded and combed numbers, and prices showed very little change. Dealing has been mostly in spot and nearby deliveries, and it is quite likely that the markets may continue in this same condition until after the inventory period has been passed.

"Production, on the whole, is about the same among the spinners as it has been for several weeks. Conditions differ widely between different plants in the same locality, and making virtually the same kind of yarns. Some of the coarse and medium count yarn mills in the East have materially increased production this week, but others in the same category have shut down more machinery."

Textile Men Banquet at Anderson.

Anderson, S. C.—Officials and heads of departments of Jackson Mills, Iva, numbering 80, were banqueted at the Pruitt Hotel in Starr Saturday evening. C. Reese McDonald was toastmaster. Grace was asked by Rev. F. H. Pressley, and then a regular banquet was served, everything that one could possibly think of in culinary art.

After the dinner was served Gen. M. L. Bonham was called upon as the first speaker. General Bonham said that looking into the faces of the men at this table he could see that they were of Anglo-Saxon stock, and he was not in favor of bringing so much Northern capital, for it meant the inevitable trend of imported labor, and that this high-class native Southern stock would be replaced by Huns and "Iskis," then a serious problem would be faced in the South.

Rev. J. L. Jett and Dr. C. H. Burton also spoke of the benefit of mills in the South, the model mill village and touched on other points along this line. Many of those present had been continuously in the employ of Jackson Mills since the industry was established by the late Thomas C. Jackson, in 1905, and there has never been any labor troubles at this mill.

Foreign Markets for Knit Goods.

Washington, D. C.—The popularity of American made hosiery in South Africa is indicated by the many applications made to the consulate by local agents for American hosiery lines, both high grade silk lines and cheap cotton. Some American exporters deal with this market through wholesale merchants, but this method can hardly be considered satisfactory and most of the business is transacted through an agent. The agency has, in some cases, been granted to retailers and in others to manufacturers' agents, that is, agents taking orders for the manufacturer on a commission basis, usually 5 per cent. The latter method seems preferable in that the manufacturers' agent can sell to competing houses.

Peru.—Through decisions made on September 27 by the Peruvian Tariff Board the new Peruvian tariff has been somewhat revised and certain articles have been restored to their former duties, among which are mercerized cotton hose, the duty on which was changed from 3 to 4 soles per kilo, and cotton cashmere hose containing 10 per cent of wool mixture and weighing more than 200 grams per square meter, the duty of which was changed from one to one and one-tenth soles per kilo.

Italy.—Italy is developing the manufacture of knit goods rapidly and is building up a very satisfactory export trade. A large volume of orders for the winter season has been received by manufacturers of knit goods who are fully occupied. Imports into Italy of cotton stockings and socks during the year 1922 amounted to 1,475 quintals, valued at 16,043,105 lire (approximately 19 cents in United States currency).

China.—The demand for hosiery at Canton is said to be growing and the local market is largely met by goods manufactured in China. The import figures from the Chinese Maritime Customs show a decrease from former years. Imports of hosiery in 1920 amounted to $70,049, in 1921 $42,792, and in 1922 $20,238. On the other hand, exports of hosiery increased from $441,032 in 1921 to $667,856 in 1922.

Cuba.—At the present time the Cuban hosiery market as well as the market for practically all other textiles is static, merchants and consumers alike not caring to purchase above their immediate needs.

Liverpool in Gambling Row.

Manchester, England.—The cotton market, which until a fortnight ago had been steadily improving, has been thrown into a state of nervousness and confusion by wild speculation in futures attributed to gambling by outsiders on the Liverpool market. By these operations the trade is said to have been losing 1,000,000 p. s. a week.

Opinion in some quarters holds that the Liverpool Cotton Association consisting of brokers and merchants engaged in actual transactions instead of gambling in futures, can end the trouble, and it is reported as probable that the joint committee will name a delegation to visit the Liverpool association and appeal for assistance.

Some of the sufferers from the situation advocate a combination of buyers to combat the activities of the speculators. It is contended that some of the large concerns have been able to buy so far ahead that they can carry on for several months regardless of the present crisis, and it is suggested that the smaller concerns organize themselves into a buying ring.

There is also talk of appealing to the Government to support the combined efforts of the masters and the operatives.

SUPERINTENDENTS AND OVERSEERS.

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

______________ ______________1923

Name of Mill ______________ ______________

Town ______________

______________Spinning Spindles ______________ Looms

______________ ______________ Superintendent

______________ Carder

______________ Spinner

______________ Weaver

______________ Cloth Room

______________ Dyer

______________ Master Mechanic

Recent changes ______________

____

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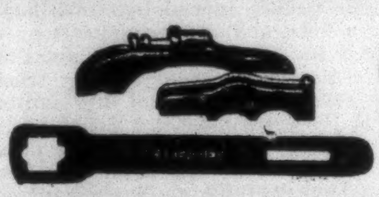

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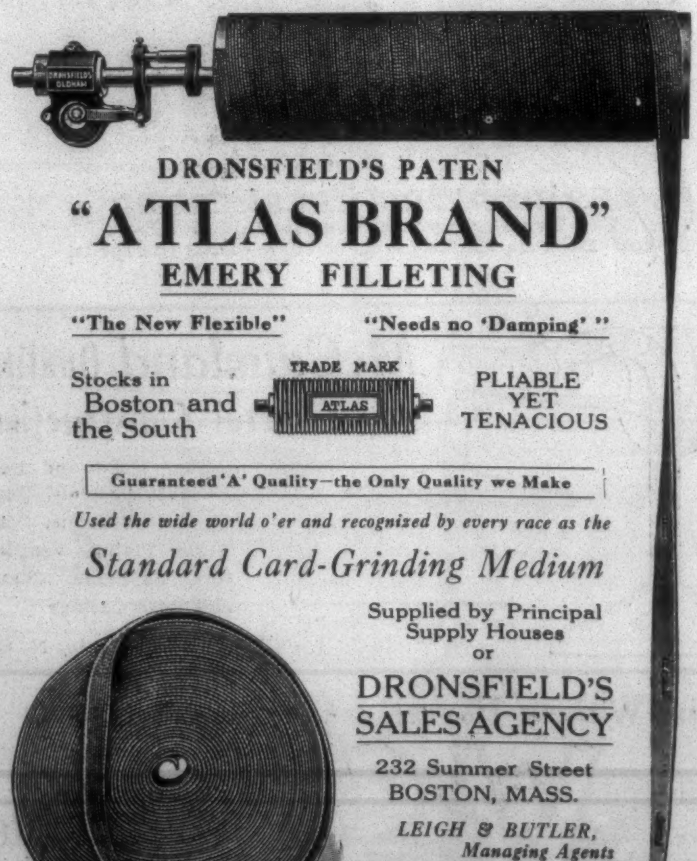

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BOSTON, MASS.

LEIGH & BUTLER,
Managing Agents

Organizing the Human Element for Safety.

(Continued from Page 19)

prominent place. Inspections are made twice a week by the plant inspector and hazards reported. Pictures of accidents are taken, staged as they actually happened as nearly as possible. These are later made into bulletins and stereopticon slides. The slides are shown noon hours to all employees who care to attend, and also at all safety meetings. Usually a good moving picture comedy is shown at noon to draw a large crowd. Moving pictures are taken of accidents, staged as realistically as possible. These moving pictures are also shown during the noon hours and cause a great deal of interest and talk throughout the mills. Suggestion boxes are placed in various parts of the mills, and any employee may drop cards furnished for that purpose in these boxes. Clocks designed to show the number of accidents each month are placed at the mill entrance, and each time an accident occurs the hand of the clock moves forward.

All of these things, of course, produce a psychological effect on the minds of the workers. In the course of six months a considerable decrease in the number of accidents and days lost has been noticed. In a year's time accident rates have been brought down one-half of their former number, until eventually they have been reduced to a minimum.

After guarding every possible hazard we could detect on the machinery we found that certain individuals were still being hurt. Thereupon we made an intensive study of these individuals both at their work and at home, and found that the cause of accidents to these people usually arose from nervous impatience, eagerness to excel, over-hurrying in piece work for extra financial gain, youthful recklessness, inattentiveness and other inherent characteristics of the individual. Also, temporary conditions, such as fatigue from insufficient rest and nourishment, illness or extra work outside the plant, and worry about matters not pertaining to work in the plant, was found to obtain in these cases. In order to overcome these causes, special bulletins, lantern slides and moving pictures covering the subject are shown, and the overseer in a diplomatic way tries to show the individual his faults and the consequences. It has been found that the overseer is the best man fitted for this, as he has the confidence of his employees and a first-hand knowledge of their faults and troubles that no one else could get.

Another method used to bring safety to the minds of the workers is through the medium of the company magazine, which is issued once a month. Pictures of actual accidents staged, with attending explanations, and articles on safety, that even the simplest mind can grasp, all help to keep up interest. First-aid rooms are established in each mill with registered nurses and up-to-date equipment of all kinds. Treatment given at these hospitals has been found to save thousands of days of lost time and cases of blood poisoning have become a rare thing.

At all field days held by the company, safety pageants are staged, which cause a great many laughs, and keep tongues wagging in the mills for a good many days. At the summer camp for children of employees, safety committees are formed, and interesting lectures are given to the children throughout the summer. Hundreds of children pass through this camp every summer. A good many of them are future employees of the company, so an advantage is gained by having hundreds of new employees pouring into the mills fully trained in the principles of safety. Not only that, but after leaving the camp they go home and talk safety to their parents, which tends to make the latter safer workers in the mills.

Cloth Conditioning.

(Continued from Page 18)

the attitude of "let well enough alone." Every man owes it to himself and the community to be always searching for something that will better what our ancestors have done. You all have ideas, which, if properly developed, will add to the material comfort and prosperity of the community and incidentally to your own. Use these talents, and don't be afraid of making mistakes. It is only through vision and work that great advancement comes. Seldom it is that anyone stumbles on something which immediately receives universal approbation.

Let us try to improve by studying more carefully the application of nature's laws rather than feeling that the only way to progress is by the output of intensive labor.

John M. Morehead Dead.

John M. Morehead, prominent textile manufacturer and a leader in State and National affairs in the Republican party, died at his home in Charlotte on last Thursday morning after a week's illness from pneumonia.

Mr. Morehead for many years was at the head of the Leaksville Woolen Mills, Leaksville, N. C. He first took charge of these mills when they were owned by his uncle, but later the mills passed to his own hands and he successfully operated them for many years. In 1908 he was elected Congressman from North Carolina and served with distinction to himself and party.

In 1912 Mr. Morehead established a branch woolen mill near Charlotte and moved the offices of the company to this place. Recently the more active management of the mills has been in the hands of his son, John Morehead.

Mr. Morehead was vice-president of the Thrift Manufacturing Company, Paw Creek, N. C., and a director in the Highland Park group of mills. He was one of the leading business men of his city and was a member of many of the leading clubs and civic organizations.

Funeral services were held last Friday morning from the residence.

PERSONAL ITEMS.

(Continued from Page 23)

J. G. Stevenson, from Baldwin Mills, is second hand in machine shop, Eureka Mills, Chester, S. C.

L. B. Knox has been promoted from second hand to master mechanic at Eureka Mills, Chester, S. C.

A. L. Fleming has been promoted from section hand to second hand in spinning at Eureka Mills, Chester, S. C.

A. A. Drake, Jr., has succeeded C. H. Williamson as secretary and treasurer of the Bibb Manufacturing Company.

Benjamin P. Green, assistant superintendent Standard-Coosa Thatcher Company, Chattanooga, Tenn., with his overseer of warping, Clifford Brown, has been on a trip to several mills in North Carolina.

J. W. Bounds, formerly overseer of weaving Cannon Mills Nos. 3 and 4, of Kannapolis, N. C., recently overseer weaving of the Elmira Cotton Mills, of Burlington, N. C., has given his resignation, and will take charge of the worsted weaving at the Southern Worsted Corporation, Greenville, S. C., January 1.

SUPERINTENDENTS AND OVERSEERS.

Hermitage Mills,
Camden, S. C.

16.640 spinning spindles; 390 looms.

W. E. Hammond	Supt.
D. C. Lewis	Carder
S. L. Crolley	Spinner
C. B. Martin	Weaver
W. T. Mattox	Cloth Room
L. E. Myers	Master Mechanic

Franklin Cotton Mills,
Concord, N. C.

29,536 spinning spindles.

J. M. Talbert	Supt.
J. H. Wade	Carder
W. P. Whitley	Spinner
C. W. Dabbs	Night Carder
O. L. Lefler	Master Mechanic

Arnall Mills.
Sargent, Ga.

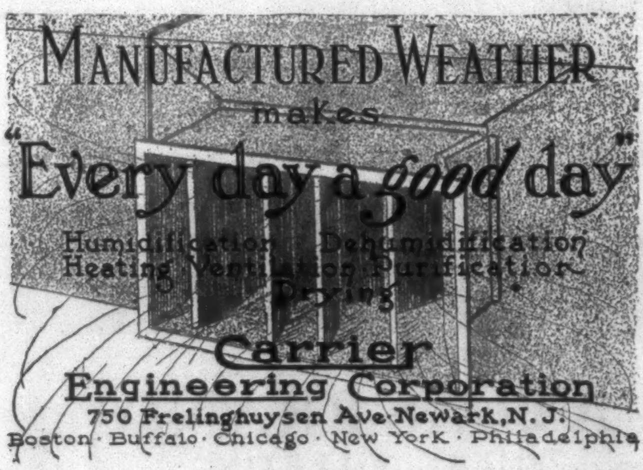
18,000 spinning spindles.

J. A. Smith	Supt.
Bob Lewis	Carder
Dennis Ward	Spinner
W. P. Smith	Master Mechanic

Raeford Cotton Mill,
Raeford, N. C.

C. K. Quick	Supt.
A. J. Kelley	Carder
L. O. King	Spinner
T. C. Ammons	Master Mechanic

Wanted—Good card grinder for 15 Whitin cards. Pay $3 per day. Address Card Grinder, care Southern Textile Bulletin.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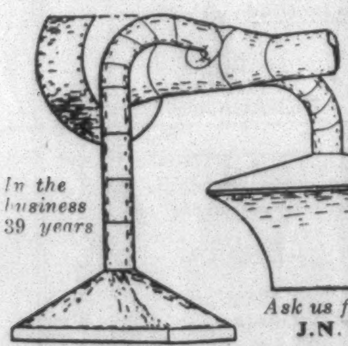
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THOMAS GRATE BAR COMPANY
BIRMINGHAM, ALA.

The World's Cotton Famine.

(Continued from Page 10)

they could reap a profit out of their labor.

The men, whether in this country or in Europe, who have fought to break down the price of cotton have perhaps made "blood money" out of human suffering, but they have brought about a world condition in which the cotton growers to a large extent were too poor to make the kind of fight which should have been made against the boll weevil. The South is now learning that in diversified farming there is more profit and better living conditions even than with cotton at high prices. The world will suffer from a cotton famine, but the South through the boll weevil has learned a lesson with billions of dollars to its future.

Affinity of Textile Fibres for Dyestuffs.

The color affinity of fibres is dependent on their being in a hydrated or turgid state. If this turgescence of the fibre is not present, the dyeing will not be even and will not be fast. Also if the turgescence of a dyed fibre be destroyed the fibre will no longer be capable of holding the dyestuff.

This conception of color affinity has been arrived at by the study of the microscopic appearance of wool, silk and cotton dyed with all classes of dyestuffs.

In a well-dyed sample, which is fast to rubbing, the distribution of the color is uniform, the fibres resembling a solidified solution of gelatine colored with the dyestuff. Such fibres are completely transparent. On the other hand, unevenly dried fibres, which are not fast to rubbing, appear turbid, and the color is unevenly distributed.

Hence dyeing may be regarded as the solution of the dyestuff by the fibre; it must, however, be pointed out that the fibre is not in itself a solvent, but becomes such in the turgid condition.

This theory is supported by the loss of affinity for dyestuffs of wool treated with acetic anhydride and sulphuric acid, the dehydrating action having apparently destroyed the turgescence. The color affinity is restored on steeping in 50 per cent, sulphuric acid for several hours, the effect being presumably due to the hydrating action of the acid.

Further, if mercerized cotton be heated to 100 to 140 degrees C., or be steamed under 1 kg. pressure, its color affinity is destroyed. Similar treatment of wet goods does not decrease the color affinity so much, whilst if the goods were previously treated with glycerine, no diminution in the color affinity occurs.

These cases can be explained quite satisfactorily by the "turgescence" theory.

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The Week's Cotton Trade.

Cotton prices during the week ending December 14 were again very erratic, fluctuating widely. On December 10, December future contracts on the New York Cotton Exchange closed at 33.20 cents, compared with 35.85 cents on December 12, and 34.48 cents on December 14, the final closing price showing a decline of 77 points for the week.

The Crop Estimating Board's report on December 12 of 10,081,000 bales of 500 pounds gross weight, was a little larger than the trade had expected, which was one of the contributing factors to an extremely unsettled market for the remainder of the week. Good buying was reported on the declines which at one time was nearly 4½ cents below the high price reached so far this season. Reports from the dry goods markets are mixed, the feeling being very unsettled, due to the continued broad movement in price changes of the raw material.

The average of the quotations for middling cotton in 10 designated spot markets was 33.82 cents per pound on December 14 compared with 34.22 cents, the close of the previous week. The volume of cotton tendered so far on December future contracts at both New York and New Orleans has been very large with indications that the end of the month will find the certificated stock at both markets unusually heavy.

Exports for the week amounted to 118,136 bales, compared with 271,215 bales the previous week and 111,904 bales for the same period in 1922. Exports from August 1 to December 14 were 2,776,605 bales, compared with 2,545,634 bales for the same period last year. Figures include exports to Canada to October 31.

Certificated stock at New York on December 14 was 80,071 bales, and at New Orleans, 22,873 bales. Total stocks, all kinds, at New York were 121,327 bales, and at New Orleans, 278,366 bales.

New York future contracts closed December 14: December 34.48 cents; January, 33.80; March, 34.25; May, 34.40; July, 33.53. New Orleans closed: December, 33.98; January, 33.85; March, 34.09; May, 34.04, and July, 33.35. New Orleans spot cotton 34.75 cents per pound.

Cotton Movement From August 1 to December 14.

	1923 Bales	1922 Bales
Port receipts	4,265,669	3,712,968
Port stocks	1,109,697	1,083,969
Interior receipts	5,154,909	5,205,505
Interior stocks	1,178,745	1,426,330
Into sight	7,104,064	6,775,578
Northern spinners' takings	899,257	1,088,025
Southern spinners' takings	1,989,263	2,364,314
World's visible supply of American cotton	3,359,142	3,899,290

Chinese Piece Goods Compete With Foreign Cloths in Amoy.

Foreign cotton piece goods and cotton yarns are now meeting serious competition in the Amoy market from Chinese factory products. A strong trade in the coarser grades is being established locally, and certain varieties of fancy cottons are coming freely into South Fukien. These Chinese goods are brought mainly from Shanghai and Swatow, and are sold not only in Amoy and the immediate surroundings, but Changchow, Tung-an, and Shima also take large supplies for the local trade and for redistribution to interior points.—Consul A. E. Carleton, Amoy, China, October 16.

New Community Work Plan at Hermitage Mills.

(Continued from Page 13)

munity work which did not place this work fully and definitely in their own hands and under their own supervision and worked out through some such organization as Hermitage Community Association."

United States Cotton Cloth Trade.

United States exports of cotton cloth decline from 500,463,464 square yards, valued at $71,465,291, in the first 10 months of 1922 to 392,310,000 square yards, worth $67,205,638, in the corresponding period of 1923. This represents decreases of 68,000,000 square yards in the unbleached classification, almost 22,000,000 square yards in bleacheed goods, 9,000,000 square yards in prints, 10,000,000 square yards in yarn-dyed cloth, and an increase of 2,500,000 in piece-dyed goods.

United States Losing Ground in Important Markets.

A study of the destination of these cotton cloth exports shows the United States to have lost ground in all important markets except Cuba, whose purchases in the first 10 months of 1923 increased about 34,500,000 square yards over those for the period January to October, inclusive, 1922. Sales to South America fell from 121,923,959 square yards, worth $17,199,270, in the 10 months ended October 31, 1922, to 88,811,938 square yards, with a value of $14,696,211, in the corresponding period of 1923. During these same comparative periods, exports of cotton cloth to the Philippines showed a loss of more than 20,000,000 square yards—a decrease of 13,000,000 square yards to Canada, and of 11,000,000 square yards to Central America.

Not only did exports of cotton cloth register losses, but the value of imports of cotton cloth increased from $33,427,159 in the first 10 months of 1922 to $38,973,188 in the corresponding period of 1923. The gain occurred in the unbleached classification, imports of which were almost $9,000,000 greater than in 1922. Owing to the fact that cotton cloth quantities were reported in pounds up to April and in square yards under the old tariff, no exact comparisons of the amounts involved can be made. An approximate idea may be obtained from the fact that in the seven months period, April to October, 1923, imports of cotton cloth comprised: Unbleached, 45,827,683 square yards, worth $8,970,100; bleached, 6,571,623 square yards, valued at $1,773,636; and colored, printed, dyed and woven figured goods, 65,253,379 square yards, with a value of $14,003,956. In the first seven months of 1922 the United States purchased 17,184,884 square yards of unbleached cloth, valued at $3,564,519; 15,620,296 square yards of bleached goods, with a value of $4,252,597; and 59,033,926 square yards of colored, dyed, printed and woven figured cloth, worth $18,028,997.

Imports of cotton cloth into the United States, by countries, during the first 10 months of 1923 were as follows:

Countries of origin.	Unbleached.	Bleached.	Colored, dyed, printed or woven-figured.
Kingdom	13,461,129	2,212,741	15,391,843
Switzerland	977,784	695,478	776,565
United France	$146,378	$117,808	$1,939,848
Japan	40,830	79,595	1,628,128
All other countries	110,935	101,387	1,292,739
Total	$14,737,056	$3,207,000	$21,029,123

British shipments of cotton piece goods to the United States in 1923 have been many times pre-par totals, aggregating $31,065,713 in the first 10 months of the current year. Imports of bleached goods were about the same as in 1922, but in the other classifications the United Kingdom made serious inroads in the American market. Japan also increased its sales of colored, dyed, printed and woven-figured goods to the United States.

High Cost of Cotton Handicaps Mexican Cotton Industry.

The press continues to report that the rising price of cotton in Mexico has greatly aggravated the financial depression from which the textile industry is suffering and states that a number of the smaller mills which are still operating will be forced to close down within a very short time. It is admitted that the larger mills, which are holding large stocks of cotton, should be able to survive the present crisis.—Assistant Trade Commissioner H. Bentley MacKenzie, Mexico City, November 17.

Dutch Cotton Mills Report Sales at Disappointing Prices.

Dutch cloth mills report slightly increased business, although sales prices are still disappointing. Inquiries are reported from British India, but the contracts thus far passed have not been very profitable. Chinese and South American demand is classed as favorable, while Java, in particular, shows more extensive buying of cambrics and shirtings for the batik industry.

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Bethayres, Pa.

Organization and Construction of Dye Houses.

(Continued from Page 8)

21. Type of Building. Dye houses are built both single and multiple-story and are successfully operated either way. The multiple-story building is satisfactory if it is not too wide and the operations on the upper floors are not interfered with by ventilating ducts passing through the floors. The upper stories in such cases are generally used for the driers and storage of dyed stock. When the plant is cramped for space, a dye house of this kind is justified. But on the whole a one-story building is much better for both light and ventilation and is the type of dye house best fitted to give satisfactory results.

22. Size of Building. In determining the general dimensions of the building a machinery organization plan must be made of the equipment to be installed. The width of the bay is not essential and is usually about ten feet. The length of the span from column to column and column to wall should provide space for one row of kettles and an ample working alley.

23. Materials and Construction. The most satisfactory type of building for a dye house is that of slow burning mill construction consisting of brick walls, wood roof and concrete foundations and trenches. The use of exposed steel is to be avoided in every way and for this reason wood sash are preferred to steel, because of the corrosion due to moisture and acid fumes. An ordinary flat roof with a monitor, using hard pine beams and 4-inch spruce plank, works out satisfactorily. The extra thickness of roof plank is necessary in cold climates for insulating purposes. Spruce or Douglas fir is preferable to hard pine as the latter contains resin which is softened by the heeat and is likely to drop down upon goods waiting to be dyed. All timber and plank used in the roof and the monitor should be treated after the framing has been done and before putting into place. This necessitates that much of it be done on the job. It is the best safeguard against decay and well worth the expense.

24. Sash. It is desirable that dye houses located in cold climates should be equipped with double sash to prevent condensation. The extra sash is put in from the inside and can be made removable if desired. Double glazing is sometimes used to accomplish the same purpose and will be fairly effective if the space between the two lights of glass is about one-half inch.

25. Dyer's Office. An office should be provided for the dyer, located on the north side of the room if possible, having a large window, preferably of plate glass, at which he can match sample of work taken from kettles, for shade and color.

26. Drug Room. Space should be provided for the storage of dyestuffs and chemicals used in the dye house. This room should be near the dyer's office and partitioned off from the kettle room. It should be well lighted and have a steam and water supply to convert dry colors into liquid form before they are placed in the kettles.

27. Laboratory. The modern and well equipped dye house of today is provided with a laboratory where the dyestuffs and chemicals purchased may be tested and small samples of stock dyed. This should be located next to the dyer's office and connected to it.

28. Trenches. Practically all types of dye kettles and washers are set so that much of the machine is below the floor level. In times past it was customary to cut a hole in the floor which was four or five feet above the ground and set the machine on some wood bolsters or masonry piers. The waste was allowed to run out on the ground and find its way to an open drain. This sort of an arrangement made repairs very difficult and expensive and prevented the proper upkeep of the machines.

29. This is avoided now by building concrete trenches about 11 feet wide by 6 feet deep in which supports are provided for the machines, leaving a clear space underneath for the flow of the waste, and ample room all around to get all the parts requiring attention.

30. In large dye houses and also in those where, because of local ordinances, it is necessary to separate the hot waste dye liquor from the rinse water, an auxiliary drain should be provided in this trench. This is done by installing a separate drain pipe on one side or partitioning off part of the trench. The kettle is then provided with two waste pipes, one of which is connected to the closed drain and one opens into the trench. If the hot liquor is run off into the open trench, it gives off clouds of steam which rise around all the machines. A main intercepting drain crosses the dye house, with which all the trenches are connected, and in some cases two such drains are provided to keep the wastes separate.

31. Floors. In a dye house of the above description the trenches are planked over after the machines are placed and all spaces between the trenches are backfilled and the floor laid directly on the ground. The floor consists of a concrete base with a top of either granolithic or paving brick, pitched to drain into the trenches. A granolithic top is only good in small dye houses where the trucking is light, because such floors crack more or less and break down at the edges under traffic, causing depressions which hold water and make trucking difficult. A granolithic floor that will stand up under heavy trucking can be laid by placing cast iron grids on the concrete base and putting the granolithic finish over the grids and floating flush with the top. This floor is expensive but will stand a great deal of abuse. The best floor is obtained by using a vitrified paving brick bedded in cement mortar and well grouted. These brick should be not less than two inches thick and thoroughly vitrified. A common hard burned brick will not answer the purpose.

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Report on Work of Textile Division.

(Continued from Page 7)

"A survey of all Government specifications for textile materials has been made, showing over 950 specifications covering over 1,500 separate materials. A complete file is being collected for consideration of each of the materials as they are taken up by the committee. After a tentative draft has been formed, it is referred to manufacturers' committees for comment. Committees representing the various parts of the textile manufacturing industry are being thoroughly organized to expedite the handling of this work. In the cotton industry, for instance, a small committee formed from the largest associations handles the specifications, referring them to the manufacturers of the particular product under consideration, which results in a complete survey of commercial practice.

"From all these comments, criticisms, and collective data a tentative specification is formed, and after approval by the textilees committee and the commercial committee it is submitted to the board for adoption and promulgation.

"Progress of the textile specifications is summarized as follows: There have been completed specifications for numbered duck and the measurement of hosiery; there have been submitted to commercial technical committees specifications for army duck, shelter tent duck, dredging sleeve duck, denim, and sheeting; and the committee is now considering wool and cotton bunting, felt, and blankets.

"In addition, some data and comments were prepared on typewriter ribbons and handed to a committee formed to consider them. Also, standard methods of test have been adopted by the committee and the various commercial committees.

Research and Standardization.

"It is the desire of the bureau to be of maximum assistance to the commercial world both through the introduction of research and standardization, and through assistance in obtaining fundamental data, upon which standardization can be based. Along these lines the textile industry has been successfully approached and organized into one main committee known as the main advisory committee of the Bureau of Standards on research and standardization. This committee takes into consideration particularly the manufacturers of the industry, and the work should be broadened to include the jobbers, retailers, and allied industries. The main committee has met on three occasions.

"The last meeting was held on June 1, and resulted in the appointment of John P. Wood, of the wool industry, as chairman. The following associations have appointed advisory committees to work with the bureau on subjest of particular interest to them: The National Association of Wool Manufacturers, the American Association of Woolen and Worsted Manufacturers and the National Association of Woolen and Worsted Spinners have appointed a joint committee; the National Association of Cotton Manufacturers and the American Cotton Manufacturers Association have also appointed a joint committee; National Association of Hosiery and Underwear Manufacturers, Cordage Institute, Cotton Duck Association, Silk Association of America, National Association of Finishers of Cotton Fabrics, Association of Manufacturers of Window Shades and Shade Cloth, National Tent and Awning Manufacturers Association, Interstate Sotton Seed Crushers' Association, American Association of Wool Blanket Manufacturers, and National Committee on Prisons and Prison Labor."

German Mills Consume Less Cotton in 1922-1923.

Washington.—Decreased consumption of cotton by German mills during the 1922-1923 season, as compared with that of 1921-1922, is reported to the United States Department of Agriculture, by E. C. Squire, American Agricultural Commissioner at Berlin.

The total consumption during the year ended July 31, 1923, was 853,000 bales, as compared with 1,083,000 bales during the preceding year, a reduction of 21 per cent. The average consumption of cotton in Germany during the three years, 1911 to 1913, was 1,874,000 bales.

Consumption of American cotton by German mills was 622,500 bales during the 1922-1923 season, as compared with 827,000 bales during 1921-1922, a decrease of 25 per cent.

The present supply of cotton goods in Germany is almost as low as it was at the end of the war, when the country was practically bare of all cotton products, says Mr. Squire, who attributes the situation to increasing lack of credit facilities.

To remedy this condition, the Association of German Cotton Spinners is urging that American bankers and shippers grant more favorable commercial and financial credits.

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Cotton Goods

New York.—Cotton goods markets remained seasonably slow last week, although prices on practically all classes of goods have been advanced to a level slightly more in keeping with the higher cotton prices. The advance on wide sheetings has amounted to 5 cents a yard on a basis of 10 bleached goods, the new price basis being now at 70 cents.

There has been another advance in tickings. Percales and bleached goods were not active sellers at the new prices. Print cloths and convertibles showed a light price drop after the break in cotton, but have gained some ground since then. Fair sales of wide flannels were reported for the week. Retailers are busy with their holiday trade and are not buying except as they need to fill in stocks. The jobbing trade is more interested in the inventory period and early spring shipments than in buying additional goods at this time.

One of the features of last week's business was the large buying of wide cloths for rubberizing purposes by the Ford interests. It was estimated that orders for these goods amounted to as much as 8,000,000 yards. The orders called mainly for 2-yard and 2-37 yard drills in narrow widths and 1.05 yards in widths to 50 inches for covers and other purposes. The reported prices for the narrow drills were 48 to 50½ cents a pound.

At the end of the week, print cloths could be had on the basis of 11 cents for 38½-inch, 64x60s. Some spot sales of 60x48s were made at 9½ cents. Many offerings of prints from second hand at concessions but buyers did not appear interested.

Sheetings sold at 10⅞ cents for 31-inch 5-yards and 12¾ cents for 37-inch 4-yards from second hands. Mills declined these prices and would make no change. There was little or nothing doing in convertibles at first hands.

Tire Fabrics.—Opinions are divided in the fabric market as to prospective conditions in the tire trade. Whether the first three months' business will lead to expanding commitments is a matter of concern to many. A number are counting on a normal quantity of fabrics selling during the first half of 1924. Orders are being cut in half now, which will lead to later contracts.

Some 40-inch, 72x68, 9.50 combed lawn spots had sold at 12¾ cents; 40-inch, 76x72, 9.00 yard spots sold East at 13 cents, spots of 40-inch, 96x100, 7.00 yard sold at 19 cents.

One mill reported having sold some 68x56, 11.00 yard organdie at 11 cents, spots. This is one-half cent a yard over what is heard in our market.

Some of the important factors are looking for better business early next year, and add that they expect to see the forerunner before the end of the year. Right at the moment, there is the belief that the cotton market is "tired" and recessions and irregularities are expected. However, general opinion looks to see the strength of the cotton market assert itself later.

Cotton goods prices were quoted on Saturday as follows:

Print cloths, 28-inch, 64x64s, 8½ cents; 64x60s, 8¼ cents; 38½-inch, 64x64s, 11½ cents; brown sheetings, Southern standards, 17 and 17½ cents; tickings, 8-ounce, 30 cents; denims, 2.20s, 27½ cents; prints, 10¾ cents; staple ginghams, 19 cents; dress ginghams, 21 and 24 cents.

Italian Exports of Raw Silk Increase.

During the first half of 1923 exports of raw silk from Italy amounted to 2,368 metric tons, valued at 874,000,000 lire (the average value of the lira in the first half of 1922 was $0.05; in the first six months of 1923 it was $0.048), as compared with 2,028 tons valued at 773,000,000 lire, in the corresponding period of 1922—an increase of approximately 100,000,000 lire. Foreign sales of silk manufactures show a gain of about 60,000,000 lire.—Commercial Attache H. C. MacLean, Rome.

Austrian Cotton Spinning Industry More Active.

During September, the Austrian cotton spinning industry showed some improvement, compared with August, according to figures furures furnished by the Austrian Association of Cotton Spinners and Weavers. Austria has 1,096,744 spindles, of which 1,001,508 reported at the end of September. Of the latter number, 72 per cent were in operation, compared with 70 per cent in August. Cotton consumption increased from 3,694,278 pounds in August to 3,992,017 in September. Yarn deliveries were 3,644,194 pounds in September against 3,433,095 in August, or 6 per cent greater.—Assistant Trade Commissioner E. W. Burckel, Vienna, November 8.

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The Yarn Market

Philadelphia, Pa.—The yarn markets were firmer during the week, but buying interest was dull and only a moderate amount of business was reported. Yarn buyers are apparently not disturbed over the higher cotton prices, even though the majority opinion seems to be that, although wide fluctuations may be seen in cotton during the next few weeks, cotton prices will work higher later on. During the last advance in cotton, yarn prices have failed to come within a considerable distance of cotton prices and yarns have been consistently under replacement values. This was doubtless due to the delay in purchasing which has been a fixed policy with yarn buyers. They have been content to place small order business to cover their actual needs, and have showed little disposition to contract for their future requirements. One of the objects of this buyers' policy has been to keep inventory as low as possible. For this reason, many men in the yarn trade believe that buyers will after come into the market and that buying will be much more active after the first of the year. They feel that the time has about come when more normal stocks must be carried by yarn consuming plants.

Spinners' prices were very firm during the past week, and mill prices were regularly maintained. In second hands, however, concessions were frequently noted and prices were rather irregular. Quotations on carded yarns varied as much as 2 and 3 cents a pound. The bulk of the business covered only small orders and the trade reported no large business.

In the combed yarn division, spinners' prices were fairly firm, but were softened in spots by the lower offerings from holders of spot yarns. A few sales of fine combed and mercerized yarns were reported. Yarn prices were quoted at the week-end as follows:

Two-Ply Chain Warps.

2-ply 8s	51	a—
10s	52	a—
12s to 14s	53	a54
2-ply 16s	54	a—
2-ply 20s	56	a57
2-ply 24s	58	a59
2-ply 26s	59	a60
2-ply 30s	62	a63
2-ply 40s	70	a72
2-ply 50s	83	a—

Two-Ply Skeins.

8s	50	a—
10s to 12s	50½	a51
14s	52	a—
16s	53½	a—
20s	55	a56
24s	58	a58½
26s	59	a—
30s	61	a62
36s	67	a—
40s	70	a—
40s ex.	74	a75
50s	82	a—
60s	90	a—
Tinged Carpets—		
3-ply	47	a—
Act tinged	48	a—
4-ply	48	a—
5-ply	48	a—

Part Waste Insulating Yarns.

6s, 1-ply	45	a46
8s, 2, 3 and 4-ply	46	a47
10s, 1-ply and 2-ply	47	a47
12s, 2-ply	48	a50
20s, 2-ply	55	a—
26s, 2-ply	58	a59
30s, 2-ply	60	a61

Duck Yarns.

3, 4 and 5-ply—		
8s	50	a—
10s	50	a51
12s	52	a—
3, 4 and 5-ply—		
16s	54	a—
20s	55	a56

Single Chain Warps.

10s	51	a—
12s	52	a—
14s	53	a—
16s	54	a—
20s	55	a—
24s	58	a—
26s	59	a—
30s	61	a62
40s	72	a—

Sinkle Skeins.

6s to 8s	48½	a—
10s	49	a—
12s	50	a—
14s	51	a—
16s	52½	a—
20s	54	a—
24s	56½	a—
26s	57	a—
30s	60	a61

Frame Cones.

8s	49	a—
10s	49	a49½
12s	50	a—
14s	50½	a—
16s	51	a—
18s	51½	a52
20s	53	a54
22s	54	a54½
24s	55	a55½
26s	56	a56½
28s	58	a—
30s	60	a—
30s bdl. ord.	63	a65
30s tying in	59	a—
40s	68	a70

Combed Peeler Cones.

10s	57	a58
12s	58	a59
14s	59	a60
16s	60	a61
18s	61	a62
20s	62	a62½
22s	63	a63½
24s	63½	a64
26s	64½	a65
28s	65	a66
30s	66	a68
32s	71	a73
34s	73	a75
36s	78	a80
38s	79	a81
40s	80	a82
50s	85	a90
60s	95	a1 00
70s	1 10	a1 15
80s	1 25	a1 30

Carded Peeler Thread Thread Twist Skeins.

20s, 2-ply	60	a—
22s, 2-ply	60	a—
22s, 2-ply	61	a—
24s, 2-ply	62	a—
30s, 2-ply	65	a—
36s, 2-ply	69	a—
40s, 2-ply	74	a—
45s, 2-ply	78	a—
50s, 2-ply	87	a—

Carded Cones.

10s	52	a—
12s	53	a—
14s	54	a—
20s	55	a56
22s	56	a58
26s	60	a61
28s	62	a63
30s	63	a65

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P. O. Box 792 - - - - GREENVILLE, S. C.

U. S. Ring Travelers are **uniformly tempered** which insures even-running spinning. They are also correct as to **weight** and **circles.** Quality guaranteed.

DRAKE
CORPORATION

"Warp Dressing Service Improves Weaving"

NORFOLK - - VIRGINIA

EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00 which will also cover the cost of carrying a small advertisement for one month.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as overseer weaving. Familiar with variety of weaves and can furnish excellent references. Address No. 3805.

WANT position as superintendent, overseer weaving. Thoroughly trained in all departments of mill, I. C. S. graduate. Understand jacquard weaving. Age 30, married, no bad habits. Good references. Address No. 3806.

WANT position as overseer spinning or as assistant superintendent by man who can get results, either yarn or weave mill. Best of references. Address No. 3807.

WANT position as overseer spinning. Age 37, 12 years as overseer. First class references. Address No. 3808.

WANT position as superintendent, or overseer large card or spinning room. High class man, experienced and practical, references to show good past record. Address No. 3809.

WANT position as superintendent of large yarn mill. Have been overseer and superintendent in some of best yarn mills in North Carolina. Have fine record as to quality and quantity at low cost. Address No. 3810.

WANT position as carder or spinner or both. Capable of handling large room in first class man. Long experience, fine references. Address No. 3811.

WANT position as carder or spinner. Experineced mill man, now running card room at night but want day job. Good references as to character and ability. Address No. 3812.

WANT position as superintendent. Practical man of long experience and ability to get good results. Now employed as superintendent. Good references. Address No. 3813.

WANT position as master mechanic. Have had 24 years experience in cotton mill shops both steam and electric drive. References. Address No. 3813-A.

WANT position as overseer weaving on Draper looms, plain white goods preferred. Now employed, but desire better job. Good references from good mill men as to character and ability. Address No. 3815.

WANT position as overseer carding. Good man, now employed, but wish better position. First class references showing good past record. Address No. 3816.

WANT position as superintendent of yarn or weave mill. Long experience in carding, spinning and weaving, and winding. Can get quantity and quality production at lowest cost. Age 39, good character and references. Address No. 3817.

WANT position as superintendent. Practical manufacturer of ability and experience. Good manager of help. Fine references. Address No. 3818.

WANT position as overseer weaving. First cuass weaver in every respect, sober, reliable and hard worker. Experienced on wide variety of goods. Good references. Address No. 3819.

WANT position as superintendent or manager of yarn or cloth mill in the Carolinas. Now general superintendent of large mill, have held job satisfactorily for three years but have good reasons for wanting to change. Good references. Address No. 3821.

WANT position as superintendent, overseer carding or assistant superintendent on yarn or plain cloth mill. High class, reliable man, good manager of help. A-1 references. Address No. 3822.

WANT position as overseer weaving. Strictly high class man of good character; long experience in weaving, best of references. Address No. 3823.

WANT position as superintendent, or carder or spinner. Now employed as spinner in mill on fine yarns and am giving entire satisfaction. but want larger place. Good references. Address No. 3824.

WANT position as superintendent, carder or spinner. Practical man of long experience in good mills. Fine references. Address No. 3825.

WANT position as master mechanic. Now employed, but want larger job. Many years experience as mechanic, steam and electric drive. Excellent references. Address No. 3826.

WANT position as superintendent or traveling salesman. Experienced mill man and can give excellent references. Address No. 3827.

WANT position as superintendent. Have held position as such in some of the best mills in South and give satisfactory references to any mill needing first class man. Address No. 3827.

WANT position as master mechanic. Long experience in mill machine shop, fully competent to handle large job. Fine references. Address No. 3829.

WANT position as overseer carding or spinning, or superintendent. Practical man who has had many years experience as superintendent and overseer and can get satisfactory results. Best of references. Address No. 3821.

WANT position as superintendent of yarn mill or carder or spinner. Thoroughly familiar with these departments and am well qualified to handle either a room or a mill. Good references as to character and ability. Address No. 3832.

WANT position as superintendent of mill in North Carolina making yarns or print cloths. Now employed as superintendent of 27,000 spindle mill making 30s hosiery yarn and 64x60s print cloth. Am giving satisfaction but have good reason for making change. Best of references. Address No. 3833.

WANT position as superintendent or overseer carding. Long experience as both and can get good production at low cost. Would like to correspond with mill needing high class man. Address No. 3834.

WANT position as overseer of carding. Good worker of long experience in number of good mills. First class references to show past record. Address No. 3835.

WANT position as superintendent or overseer carding and spinning. Now employed, but wish larger place. Competent, reliable man who can give satisfaction in every way. Good references. Address No. 3836.

WANT position as superintendent or manager. Have had long experience as superintendent and am high class man in every respect. Can handle mill on any class of goods made in South. Want to correspond with mill needing high class executive. Excellent references from reliable mill men. Address No. 3837.

WANT position as overseer weaving. Practical weaver who can get big production at the right cost. Fine references. Address No. 3838.

WANT position as overseer weaving. Can handle any fabric made in South. Have had over 27 years experience from loom fixer to overseer weaving and was promoted steadily by one of largest mills in the South. Married, have family, religious worker, good manager of help. Can give excellent list of references. Address No. 3839.

WANT position as superintendent, prefer South Carolina or Georgia. Now employed as assistant superintendent and weaver and am giving entire satisfaction. Have good reasons for wishing to change. Excellent references. Address No. 3840.

WANT position as overseer weaving, prefer job of fancies. Have been weaver for past 10 years with one of the finest mills in the South. Excellent references to show a fine record. Address No. 3841.

WANT position as superintendent, yarn mill preferred. High class man who is well trained and has had long experience. Best of references. Address No. 3842.

WANT position as superintendent. Now employed as such, but want better job. Good weaver as well as superintendent and get operate weave mill on very satisfactory basis. Address No. 3843.

WANT position as superintendent, carder or spinner. Now employed as superintendent. Long experience as both overseer and superintendent and can get satisfactory results. Address No 3844

WANT position as overseer carding. Have had long experience and can furnish best of references from past and present employers. Address No. 3852.

WANT position as overseer weaving. Experienced in wide variety of fabrics and can give satisfaction. Now employed. Best of references. Address No. 3853.

WANT position as dyrer, 12 years experience on long and short chain work, raw stock, beam and Franklin machines. Can handle any size jobs on cotton. Good references and can come on short notice. Address No. 3854.

WANT position as overseer carding. Experienced an dreliable man who can handle your room on efficient and satisfactory basis. Good references. Address No. 3855.

WANT position as superintendent of medium sized mill or weaver in large mill, white or colored goods; 20 years as overseer weaving, slashing and beaming in number of South's best mills. Have held present place for nine years and am giving entire satisfaction. Address No. 3856.

WANT position as superintendent of plain or fancy goods mill, would consider offer of medium size mill at reasonable salary. Thoroughly conversant with all departments. Address No. 3857.

WANT position as superintendent of yarn or cloth mill, ginghams preferred; age 40, have family; 22 years experience, 8 years as carder and spinner and assistant superintendent; have held last position as superintendent for 7 1-2 years. N. . mill preferred. Good references. Address No. 3858.

WANT position as overseer weaving or superintendent. Long experience in good mills and can get good results. Best of references. Address No. 3859.

WANT position as overseer carding; age 33, married, 14 years in carding; 5 years as overseer. Now employed but have good reasons for wishing to change. Address No. 3860.

WANT position as superintendent of weaving mill, or would take overseer weaving in large mill on plain or fancy goods. Now employed in good plant and can give good references. Fine record in good mills. Address No. 3861.

WANT position as overseer spinning, 17 years in spinning room, now employed as second hand in 35,000 spindle room; age 28, married, sober, reliable and church member. Good references. Address No. 3862.

WANT position as overseer spinning, spooling or twisting. Age 29, married, 10 years on spinning. Can furnish good reference. Address No. 3863.

WANT position as carder or spinner, or both. Age 35, married, practical carder and spinner and can furnish fine references as to character and ability. Address No. 3864.

WANT position as overseer spinning, or carding and spinning, can give good references as to character and ability, strictly sober. now employed but have good reasons for wishing to change. Address No. 3865.

WANT position as overseer cloth room, experienced on drills and sheetings; also colored goods. Can give A1 references. Address No. 3867.

WANT position as carder or spinner, or both. Experienced and reliable man, who can produce good results. Good references. Address No. 3868.

WANT position as superintendent, now employed as such, but wish to change; 4 years in present place, 8 years as carder and spinner or both warp and hosiery yarns, 5 years as spinner, been in mill over 25 years, thoroughly understand all processes from picker room to winding and twisting. Good knowledge of steam and electricity. Address No. 3869.

WANT position as overseer spinner, at $30 weekly or more, now employed in good mill, practical and experienced man. Best of references. Address No. 3870.

WANT position as superintendent or weaver; long practical experience, and can produce quality and quantity production. Address No. 3871.

WANT position as overseer weaving; 12 years on heavy duck, 14 years as overseer on sheetings, drill, osbaurgs, grain bag, tubing and rope machines; am 48. Can change on short notice. Good references. Address No. 3872.

WANT position as overseer weaving, experienced on large variety of goods and can handle room on efficient basis. Address No. 3873.

WANT position as superintendent of small mill, or weaver in large plant; now employed as overseer slashing, warping and drawing-in on 360 Draper looms. Good references. Address No. 3874.

WANT position as superintendent, yarn or weave mill. Now employed, but wish larger place Excellent past record. Good references. Address No. 3875.

WANT position as agent superintendent or manager of Southern mill on white work. Would be interested in buying stock. Can furnish best of references and can show results. Address No. 3876.

WANT position as overseer weaving, now running 800 looms and giving satisfaction; familiar with colored checks, chambrays, many other lines; age 39, married, good references. Address No. 3877

WANT position as overseer weaving; age 29, married, I. C. A. graduate, experienced on plain and fine work including all kinds of cotton towels and specialties. Good references. Address No. 3879.

WANT position as superintendent; 28 years experience in mill, have held present place as superintendent for 8 years, have good reasons for wanting to change. Best of references. Address No. 3880.

WANT position as supt. of yarn mill, or carder and spinner. Now employed as carder. Can furnish good references to show my record. Address No. 3881.

WANT position as carder in large mill, or supt. of small yarn mill; 20 years as carder and spinned; mostly in carding and assistant supt. Now employed as carder and assistant supt. Good references. Address No. 3882.

WANT position as carder or spinner, or both. Practical man of long experience; have excellent references. Address No. 3882.

WANT position as supt. or weaver, long experience in good mills, excellent references to show character and ability. Address No. 3883.

WANT position as supt. of spinning mill, practical experienced man of good ability and can get results. Address No. 3884.

WANT position as supt. and manager of small or medium mill, or overseer of large, good paying weave room. Excellent references. Address No. 3885.

WANT position as master mechanic; 20 years experience, now employed, good references to show excellent past record. Addrss. No. 3886.

WANT position as carder and spinner or both, or supt.; 25 years in mill, 18 as supt.; married, have family. Address No. 3887.

WANT position as spinner, white work preferred; experienced and reliable man. Can come on short notice. Best of references. Address No. 3888.

WANT position as overseer of spinning, now employed as such and giving satisfaction, but wish larger place. Married, good habits, reliable and competent. Good references. Address No. 3889.

WANT position as overseer spinning. Experienced spinner, practical and capable, good character and habits, best of references. Address No. 3890.

WANT position as supt. or would take carding or spinning. Good references to show an excellent past record and can product good results. Address No. 3891.

WANT position as carder or spinner in large mill, or supt. of small or medium size mill. Long experience in good mills; good manager of help. First class references. Address No. 3892.

WANT position as supt. of small mill, with opportunity of investing in mill and advance. Long experience as overseer, good character, inventor and owner of patent that will be of great value to mill equipped to use waste sock. Patent would give mill big advantage in manufacture of twine, rope and similar products. Would take stock for entire amount of pattern and invest small amount in addition, or would consider new mill. Address No. 3893.

WANT position as master mechanic. Long experience on both steam and electric work, 14 years in mill shops, good references. Address No. 3895.

WANT position as supt., assistant supt., carder or spinner, mule or ring frames, good man of long experience, best of references. Address No 3894.

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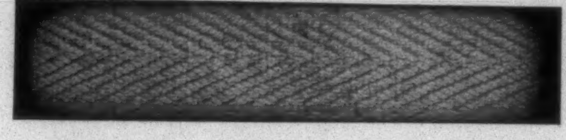

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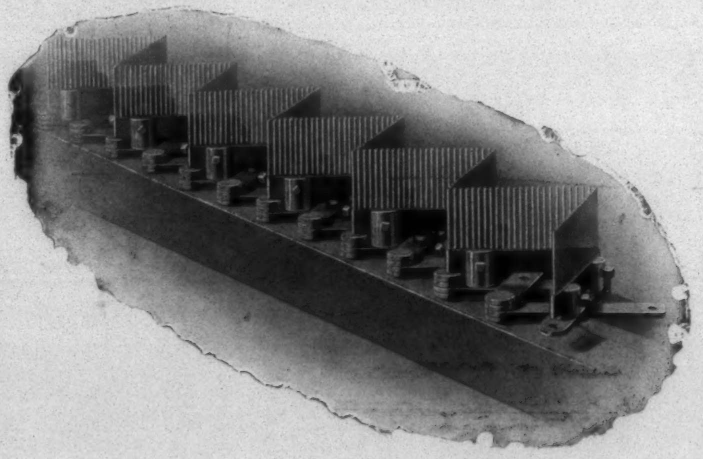

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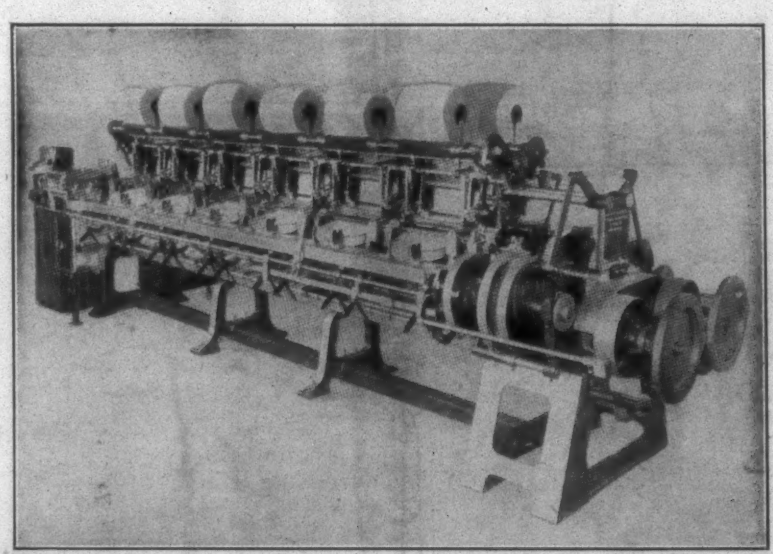

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